ADMINISTRATIVE PROBLEMS

Students' questions of an administrative nature (missing pages in subcourse, etc.) should be addressed to the primary instructor (group leader). If you have questions of an administrative nature write or call the Army Institute for Professional Development (AIPD) at the following:

Address: The Army Institute for Professional Development
ATTN: ATIC-IPS (Student Services)
U.S. Army Training Support Center
Newport News, VA 23628-0001

Telephone: DSN 927-2127/3322
Commercial (757) 878-2127/3322
email teama@atsc.army.mil

CONTENT

Students' questions about the content of this subcourse should be directed to the primary instructor (group leader). If you have questions or comments concerning course content, write or call the instructional systems specialists responsible for the subcourse. The instructional systems specialists responsible for this edition of the subcourse is Mr. Roy Davis Multimedia Development Branch, Department of Distance Learning.

Address: Academy of Health Sciences
Multimedia Development Branch
ATTN: MCCS-HLD
2250 Stanley Road (Room 326)
Fort Sam Houston, TX 78234-6130

Telephone: DSN 471-8079
Commercial (210) 221-8079

FAX: DSN 471-7538

E-mail: roy.davis@cen.amedd.army.mil

CLARIFICATION OF TRAINING LITERATURE TERMINOLOGY

When used in this publication, words such as "he," "him," "his," and "men" are intended to include both the masculine and feminine genders unless specifically stated otherwise or when obvious in context.

GENERAL

This subcourse reflects the current thought of the Academy of Health Sciences and conforms to printed Department of the Army doctrine as closely as currently possible. Development and progress render such doctrine subject to change.

The "D" edition of the Combat Lifesaver Course: Instructor's Manual (IS0826) replaces the previous "C" edition (IS0826).

This subcourse may be reproduced locally, if needed.

Units may reproduce the recertification exam.

COMBAT LIFESAVER COURSE: INSTRUCTOR'S MANUAL

INTERSCHOOL SUBCOURSE 0826

U.S. ARMY MEDICAL DEPARTMENT CENTER AND SCHOOL
FORT SAM HOUSTON, TEXAS

This subcourse is designed to be used by the instructors who teach the Combat Lifesaver Course. The Combat Lifesaver Course uses the group study mode in which soldiers study subcourse materials before coming to class and then are presented additional instruction under the supervision of a qualified instructor. This subcourse contains lesson plans for all combat lifesaver tasks presented in the student subcourses and solutions to the written examinations. Read the Introduction and the Administrative Instructions sections of this subcourse now and secure the solution sheets.

DO NOT DISTRIBUTE MATERIALS TO THE STUDENTS UNTIL YOU HAVE READ THE ADMINISTRATIVE INSTRUCTIONS.

AR 350-41, TRAINING IN UNITS, GOVERNS THE COMBAT LIFESAVER PROGRAM.

TABLE OF CONTENTS

LESSON PLANS FOR IS0825, COMBAT LIFESAVER: MEDICAL TASKS (Continued)

COMBAT LIFESAVER COURSE

INTRODUCTION

The Army battle doctrine was developed for a widely dispersed, rapidly moving battlefield. The doctrine recognizes that battlefield constraints will limit the number of trained medical personnel available to provide immediate, far-forward care. The role of the combat lifesaver was developed to increase far-forward care to combat soldiers. At least one member of each squad, team, or crew should be a trained combat lifesaver. Normally, the combat lifesaver will not be the leader of the squad, team, or crew since the leader will be less likely to have time to treat casualties in a combat situation than would another member of his squad, team, or crew.

The combat lifesaver is a nonmedical soldier trained to provide emergency care as a secondary mission. He does not replace the combat medic. The primary mission of the combat lifesaver is his combat mission. The combat lifesaver provides care to the members of his squad, team, or crew as his mission permits. When he has no combat mission to perform, the combat lifesaver may assist the combat medic in providing care to injured soldiers and in evacuating casualties.

The combat lifesaver receives training in enhanced first aid procedures and in selected medical procedures such as initiating an intravenous infusion. Combat lifesaver training is a bridge between the first aid (self-aid/buddy-aid) training given to all soldiers during basic training and the medical training given to 91W, Health Care Specialist (91B, Medical Specialist).

NOTE: The 91W Health Care Specialist is currently the 91B Medical Specialist. The 91B becomes 91W on 1 Oct 2001.

The Academy of Health Sciences developed the Combat Lifesaver Course as part of its continuing effort to provide health service support to the Army. The Combat Lifesaver Course is designed to be used by both active duty and reserve component soldiers in combat arms, combat support, and combat service support units.

The first edition of the Combat Lifesaver Course was designed to teach all of the identified tasks and took approximately five days of instruction and testing. Subsequent editions were edition is designed to take three days. One day is used to test the buddy-aid tasks presented in Subcourse IS0824; two days are used to teach and test the medical tasks presented in Subcourse IS0825. It is felt that this shorter version allows greater flexibility without significantly decreasing the soldier's ability to perform the buddy-aid tasks since the soldier has already received instruction on the tasks covered in Subcourse IS0824. The Instructor's Manual, however, contains lesson plans for the tasks contained in Subcourse IS0824 in addition to lesson plans for the medical tasks presented in Subcourse IS0825. The lesson plans for Subcourse IS0824 tasks can be used to refresh soldiers on the tasks before the examinations and/or to teach soldiers who fail the initial examinations.

Refer to Army Regulation 350-41, Training in Units, for additional information concerning the combat lifesaver program. An excerpt from AR 350-41 and other information is available at the combat lifesaver web site http://www.cs.amedd.army.mil/clsp .

ADMINISTRATIVE INSTRUCTIONS

Read the following instructions before distributing materials to the soldiers.

Check Materials

Check the materials sent by AIPD to make sure you have received all the materials. For each soldier enrolled in the course, you should have received:

One copy of Interschool Subcourse 0824 (Combat Lifesaver Course: Buddy-Aid Tasks).

One copy of Interschool Subcourse 0825 (Combat Lifesaver Course: Medical Tasks).

One copy of the Examination Packet.

One ACCP Examination Response Sheet (TSC Form 59).

If you are missing materials, contact the Army Institute for Professional Development (AIPD), Fort Eustis, Virginia. Any questions you have concerning the administration of this course, including enrollment procedures, should be referred to the Army Institute for Professional Development, **DSN 927-2127 or Commercial (757) 878-2127**.

It is recommended that you place the pages of this manual in loose-leaf binders. **Remove the solutions to the written examinations** at the end of this subcourse and **place them in a secure location** along with the computer-graded response sheets (TSC Forms 59). TAKE CARE TO NOT LOSE THE SOLUTION SHEETS OR THE RESPONSE SHEETS. If a soldier's response sheet is damaged or lost, contact AIPD to obtain a replacement.

Obtain Equipment and Supplies

You should make arrangements to obtain all of the equipment and supplies that you and the soldiers will need as soon as possible. Consult the "Equipment and Supplies Needed" section on the first page of each lesson plan and the "Materials Needed" section of each performance examination. (NOTE: Even if no classes are presented on the buddy-aid tasks in Subcourse IS0824, you will still need to obtain equipment and supplies for the performance examinations.) Training devices for the intravenous infusion task and the mouth-to-mouth resuscitation task should be available through your Training Support Center (TSC) or your Visual Information Support Center (VISC). The amount of supplies needed will vary depending upon your class size and the amount of student practice performed. Obtain sufficient supplies to retest soldiers on performance tasks.

Reserve Facilities

If you have not already done so, make arrangements to reserve facilities needed to conduct instruction and testing. The facilities should allow the soldiers to clearly see the demonstrations and provide room for student practice.

Arrange for Instructors and Assistant Instructors

Obtain instructors and assistant instructors needed for instruction and testing. Make sure each instructor is knowledgeable in the subject area to be taught. The instructor for the intravenous infusion task must be able to handle medical emergencies that may arise in addition to being proficient in administering intravenous infusions. Assistant instructors may assist in demonstrations, administer written examinations, administer performance

examinations, and assist soldiers with practice sessions. Additional information concerning instructors and assistant instructors can be found in the lesson plans.

Read Course Materials

Read the lesson plans, performance and written examinations, and student subcourses to familiarize yourself with their content. Make notes on the lesson plans as you go along. The lesson plans are written to assist you in preparing the classroom presentations. The lesson plans contain lists of needed equipment and supplies, instructions for performing demonstrations, and suggested questions to ask soldiers during the presentations. The lesson plans are designed to help you. They are not "set in concrete." The lessons are presented in the subcourses in a logical order, but you may resequence the presentations if needed.

Distribute Subcourses to Soldiers

Soldiers should be given Subcourse IS0824 at least two weeks before taking the written and performance examinations on the buddy-aid tasks presented in the subcourse. This should provide the soldiers sufficient time to study. Soldiers should be given Subcourse IS0825 at least two weeks before attending classes on the medical tasks covered in the subcourse. If the classes on the medical tasks immediately follow the testing on the Subcourse IS0824 tasks, the soldiers should be given both subcourses at the same time. **Do not give the examination booklets or response sheets to the soldiers.**

Prepare to Conduct Testing and Classes

Although this course is designed to test the buddy-aid tasks presented in Subcourse IS0824 without additional instruction, you may wish to conduct classes on the tasks presented in Subcourse IS0824. The lesson plans in the first part of this subcourse can be used to conduct refresher training prior to the administration of the examinations or to conduct reteach classes prior to retesting soldiers on failed tasks. The second set of lesson plans is used to present instruction on the tasks presented in Subcourse IS0825. Make sure that all needed equipment and supplies, personnel, and facilities are available prior to conducting class.

Call for Assistance, if needed

If you have an administrative question, contact AIPD (phone numbers given previously). If you have a question on the subject matter, contact Mr. Roy Davis (phone number given previously).

Please call the Army Institute for Professional Development concerning missing printed materials, student enrollment, or notice of course completion. All printed materials and student records are maintained by AIPD, **not** the Academy of Health Sciences.

Conduct Testing and Classes

Conduct testing on tasks presented in Subcourse IS0824. Conduct classes and testing on tasks presented in Subcourse IS0825. Additional instructions can be found in the Grading and Certification Instructions, in the Suggested Schedule, in the lesson plans, and in the examination booklet.

GRADING AND CERTIFICATION INSTRUCTIONS

The Combat Lifesaver Course is divided into two parts, the buddy-aid and preventive medicine tasks covered in Subcourse IS0824 and the enhanced first aid and medical tasks covered in Subcourse IS0825. The tasks contained in Subcourse IS0824 can be tested without any prior instruction (other than providing the soldier with Subcourse IS0824 and time to study) since these examinations cover self-aid/buddy-aid tasks which all soldiers are required to know.

The tasks presented in Subcourse IS0825 are to be covered by instruction in a classroom or field setting, as appropriate, prior to being tested. If desired, performance examinations can be administered immediately after the lesson material is presented.

All examinations are contained in the examination booklet.

Administering Subcourse IS0824 Written Examination

There are two versions of the written examination. Each version covers Lessons 1, 6, 8, 10, 11, 12, 13, and 14. Either version can be administered first. If a soldier fails the initial version, he should be retested on the alternate version. If more than one retest is given, either version can be used for additional retests. A soldier should be given additional instruction and/or time to restudy the subcourse material before a retest is administered.

All written examinations must be monitored. Position the soldiers so the temptation to look at another soldier's answer sheet is minimized.

Make sure soldiers have writing instruments before beginning the examination. Have extra pens or sharpened pencils available.

Each version of the written examinations contains an answer sheet on which the soldier is to record his response selection. Soldiers are to use the answer sheets provided with the examination, not the TSC Form 59.

Soldiers should not mark on the written examination. The examinations are to be returned to the instructor at the end of the testing period. Unmarked examinations can be used to conduct additional retests, if needed. Reproduce additional answer sheets as needed for retests.

Soldiers are not allowed to use the subcourse or notes during the examination.

Administering Subcourse IS0824 Performance Examinations

There are eight performance checklists. Each performance checklist allows the situation to be varied, thus allowing a slightly different situation to be presented for retests. Any version of the task can be administered first. If a soldier fails the initial test, an alternate version can be used for the retest. If more than one retest is given, any version can be used for

additional retests. A soldier who fails a task should be given additional instruction on the task and/or time to restudy the subcourse material before being given a retest.

Before administering a performance examination, review the list of required supplies and equipment at the beginning of the performance examination and make sure all needed materials are given to the soldier before he begins the test.

Performance examinations are to be administered one-on-one. An instructor is to observe one and only one soldier until the soldier has completed the examination (been given either a GO or a NO-GO on the task). An instructor should avoid stopping the examination unless the person acting as the simulated casualty is in danger of being injured. This will allow the instructor to observe all errors committed by the soldier, which should reduce the number of retests administered.

The checklists may be reproduced locally for use in retests. However, the checklist used for the initial performance examination can also be used for the retest if each set of instructor's markings and comments can be distinguished. For example, the instructor may use a green pen to make his check marks and comments for the initial performance examination and use a red pen to make his check marks and comments on the retest.

Administering Subcourse IS0825 Written Examination

There are two versions of the written examination. Each version covers Lessons 16, 21, 22, 23, 24, and 25. Either version can be administered first. If a soldier fails the initial version, he should be retested on the alternate version. If more than one retest is given, either version can be used for additional retests. A soldier should be given additional instruction and/or time to restudy the subcourse material covering the task before being given a retest.

All written examinations must be monitored. Position the soldiers so the temptation to look at another soldier's answer sheet is minimized.

Make sure soldiers have writing instruments before beginning the examination. Have extra pens or sharpened pencils available.

Each version of the written examinations contains an answer sheet on which the soldier is to record his response selection. Soldiers are to use the answer sheets provided with the examination, not the TSC Form 59.

Soldiers should not mark on the written examination. The examinations are to be returned to the instructor at the end of the testing period. Unmarked examinations can be used to conduct additional retests, if needed. Reproduce additional answer sheets as needed for retests.

Soldiers are not allowed to use the subcourse or notes during the examination.

Administering Subcourse IS0825 Performance Examinations

There are four performance checklists. The second checklist (taking a casualty's pulse) and the third checklist (taking a casualty's respiration) can be tested at the same time. The fourth checklist (applying a SAM splint) has two versions. Either version can be administered first. A soldier who fails a task should be given additional instruction on the task and/or time to restudy the subcourse material before being given a retest.

Before administering a performance examination, review the list of required supplies and equipment at the beginning of the performance examination and make sure all needed materials are given to the soldier before he begins the test.

Performance examinations are to be administered one-on-one. An instructor is to observe one and only one soldier until the soldier has completed the examination (been given either a GO or a NO-GO on the task). An instructor should avoid stopping the examination unless the person acting as the simulated casualty is in danger of being injured. This will allow the instructor to observe all errors committed by the soldier, which should reduce the number of retests administered.

The checklists may be reproduced locally for use in retests if desired. However, the checklist used for the initial performance examination can also be used for the retest if each set of instructor's markings and comments can be distinguished. For example, the instructor may use a green pen to make his check marks and comments for the initial performance examination and use a red pen to make his check marks and comments on the retest.

Grading Written Examinations

Written (multiple-choice) examinations are graded using the solution sheets found at the end of this subcourse.

Student answer sheets should be graded as soon as possible in order to identify soldiers needing a retest. A score of 70 percent correct or higher is passing (at least 28 items correct on the 39-item examination; at least 32 items correct on the 45-item examination). If a soldier fails the initial version of the written examination, he is to be administered the alternate version after being given an opportunity to restudy the subcourse material and ask questions.

Grading Performance Examinations

In order for a soldier to pass a performance examination, the soldier must receive a GO on each step on the checklist. If assistant instructors are to evaluate student performance, the primary instructor should ensure that scoring is consistent. If a student fails a performance test, he must be told why he failed and what he should have done to successfully complete the task.

Retests

If an examination (written or performance) is failed, the soldier must pass a retest before he can pass the course. The instructor is not limited in the number of retests that can be administered. However, the soldier must be allowed at least one retest on each examination. The course manager may establish a maximum number of retests or procedures for approving more than one retest per examination. If more than one retest is administered to a soldier, any version of the examination may be used as the retest.

Reporting Results to AIPD

In order to successfully complete the course, the soldier must pass all examinations (written and performance) on both the Subcourse IS0824 tasks and the Subcourse IS0825 tasks.

If a soldier successfully completes the course, used a No. 2 lead pencil to fill in the "a" response for examination item #1 on the student response sheet (TSC Form 59) and sign

the instruction block of the response sheet. (The person enrolled as the primary instructor should sign the response sheets.)

If a soldier will not complete the course (the soldier failed one or more examinations including retests and the course manager has denied permission to continue retesting, the soldier is no longer with the unit administering the course, or the soldier did not attend the class in which he was enrolled and will not attend another class within one year of enrollment), write the word "terminate" on the response sheet (TSC Form 59) where the responses are normally entered. This will clear the soldier's name and social security number from the computer and allow the soldier to enroll in other correspondence courses.

Send the student response sheets (TSC Forms 59) to AIPD. The sheets for the entire class may be submitted at one time. Do not send the forms to the Academy of Health Sciences. All student records are maintained at AIPD.

If a TSC Form 59 is included for the primary instructor, please mark block "a" of item #1 and return it to AIPD. The response sheet will clear the instructor's name and social security number from the computer file at AIPD and let AIPD know the subcourses arrived at the proper destination.

Nonenrolled Students

If soldiers who are not enrolled attend combat lifesaver classes, enroll the soldiers using normal combat lifesaver enrollment procedures as soon as possible. When the TSC Forms 59 arrive, complete them and return them to AIPD for processing.

Notice of Course Completion

AIPD will process the TSC Forms 59. For each soldier who successfully completes the course (block 1a marked), a notice of completion will be sent to the primary instructor listed on the enrollment form. The primary instructor is to be responsible for ensuring that the soldier receives the notice. See AR 350-41 for instructions on recording completion on the soldier's DA Form 2-1.

Promotion/Retirement Points

Soldiers can receive 8 promotion points (40 credit hours at 1 promotion point for each 5 credit hours) for successful completion of the Combat Lifesaver Course. Members of the Reserve Components can receive 13 retirement points (40 credit hours at 1 retirement point for each 3 credit hours) for successful completion of the Combat Lifesaver Course. Consult DA Pamphlet 350-59, Army Correspondence Course Program Catalog; AR 600-200, Enlisted Personnel Management System; and AR 140-158, Enlisted Personnel Classification, Promotion and Reduction, for additional information.

SUGGESTED SCHEDULE

The following schedule summarizes the information presented in previous sections.

The "D" version of the Combat Lifesaver Course is designed to be completed in three days. The days do not need to be consecutive. For example, you may wish to have a break between Day 1 and Day 2 to allow time for retesting soldiers who did not successfully complete one or more Subcourse IS0824 examinations. The following schedule is recommended.

AT LEAST EIGHT WEEKS PRIOR TO DAY 1	Enroll students and instructor. Complete a DA Form 145 (Army) Correspondence Course Enrollment Application) for the instructor. Complete a single DA Form 145 for the students [enter the instructor's mailing address on the DA Form 145 and attach a roster of students containing the name, rank, social security number, component code, and Retirement Year End date (only Reserve Component personnel include the RYE date) for each enrolled soldier]. Prepare a cover letter signed by the battalion commander or by an 0-5 or higher. Send the cover letter and DA Forms 145 with attached roster to AIPD for processing. **ALLOW SIX WEEKS FOR PROCESSING AND MAILING OF MATERIALS**.
IMMEDIATELY UPON RECEIVING COURSE MATERIALS	Review printed materials and contact AIPD concerning any missing materials or other administrative problems. Obtain or reserve supplies, equipment, classrooms, and personnel.
TWO WEEKS PRIOR TO DAY 1	Distribute Subcourses IS0824 and IS0825 to students. Answer questions. If possible, provide soldiers with a field dressing and two muslin bandages so they can practice dressing wounds, applying a tourniquet, and applying an improvised splint.
PRIOR TO DAY 1	Make sure sufficient supplies and manikins (if used) are available for testing and retesting. Instruct assistants on evaluation procedures to ensure that grading is consistent. If possible, conduct practice examinations to help the evaluators prepare to administer performance examinations
DAY 1	Set up the testing stations prior to the soldiers' arrival. Ensure that all soldiers enrolled are present. If soldiers who are not enrolled are sent, enroll these soldiers with AIPD as soon as possible. (Enroll the soldiers as though they were a separate class. They can still be tested and receive instruction with the soldiers who are officially enrolled.) Administer written and performance examinations for tasks covered in Subcourse IS0824 using the examinations in the examination packets. Grade written examinations. Additional instructions are

	given in the "Grading and Certification Instructions" section and in each written and performance examination. Conduct reteach. Reteach can consist of telling a soldier why he failed a performance test and showing him what he should have done, instructing the soldier to reread certain lessons in Subcourse IS0824, or conducting formal classes using the lesson plans furnished in this manual. Conduct retesting. Retesting can be conducted immediately after the reteach session, the day after the original testing, or even after the soldiers have completed the instruction and testing on the Subcourse IS0825 medical tasks. A soldier cannot complete the course until he has successfully passed the written and performance examinations for Subcourse IS0824 and for Subcourse IS0825.
PRIOR TO DAY 2	Make sure sufficient supplies and training devices are available for instruction and practice and sufficient supplies are available for testing. Instruct assistants on evaluation procedures to ensure that grading is consistent.
DAY 2	Present instruction on the first two lessons of Subcourse IS0825 (Course Overview and Initiate an Intravenous Infusion) using lesson plans contained in this manual. Conduct performance testing on initiating an intravenous infusion using the performance examinations found in the examination packet. Conduct reteach and retest for soldiers who did not pass the performance examination on initiating an intravenous infusion. The reteach and retest should be performed the same day (Day 2), if possible. If not, it should be performed on Day 3.
DAY 3	Present instruction on the last ten lessons of Subcourse IS0825. Lesson plans are contained in this manual. Conduct testing on Subcourse IS0825 tasks (written examination and performance examinations). Grade written examinations. Additional instructions are given in the "Grading and Certification Instructions" section and in each written and performance examination. Conduct reteach. Reteach can consist of telling a soldier why he failed a performance test and showing him what he should have done, instructing the soldier to reread certain lessons in Subcourse IS0825, and/or conducting formal classes again. Conduct retests for soldiers who did not pass the written examination or one or more performance examinations. If possible, the reteach

	and retest should be performed the same day (Day 3). If not, the retest should be conducted soon after the reteach period. If desired, the unit can present local certificates of completion to soldiers who successfully complete the Combat Lifesaver Course.
AFTER DAY 3	Conduct any remaining reteach or retest sessions. This manual places no actual limit to the number of retests that can be administered to a student, but your local standing operating procedures for the Combat Lifesaver Course may limit retests or may require the approval of the course manager prior to conducting additional retests. Complete student response sheets (TSC Form 59) for soldiers who passed the course (mark block 1a) and for soldiers to be terminated (write "terminate" in the response area). Send the response sheets to AIPD for processing. Retain the response sheets for soldiers who will attend a later class (but within one year of enrollment) and for soldiers who will take a retest at a later date. Mail any student or instructor written comments (not response sheets) to the Academy of Health Sciences. The comments will be used to evaluate the effectiveness of the materials and to correct any errors found in the materials. When the packets for soldiers who were not originally enrolled arrive, complete the TSC Forms 59 for these soldiers and return these response sheets to AIPD for processing. When the completion notifications arrives from AIPD, make sure each soldier who completed the course receives his notice of completion. Also ensure that the course is recorded on the soldier's permanent record in accordance with AR 640-10 and AR 350-41.

RECERTIFICATION TESTING

A combat lifesaver is to be retested every 12 months. Since the combat lifesaver has already shown mastery of all combat lifesaver tasks, only the most critical, life-saving performance tasks were chosen for recertification testing. The recertification examination covers three buddy-aid tasks (Clear an Object From the Throat of a Conscious Casualty, Perform Mouth-to-Mouth Resuscitation, and Put on a Field Dressing, Pressure Dressing, and Tourniquet) and two medical tasks (Initiate an Intravenous Infusion and Measure and Monitor a Casualty's Pulse). The performance checklists for the recertification examination are found at the back of this booklet and may be reproduced as needed.

The lesson plans contained in this manual can be used to conduct sustainment training prior to administering the recertification examination and/or prior to administering a retest should a soldier fail the first attempt at passing one or more sections of the recertification examination.

If the combat lifesaver passes the recertification examination, make an entry on the combat lifesaver's DA Form 2-1 (see AR 350-41). Ensuring that combat lifesavers are recertified is a unit responsibility. **Do not** send recertification information to AIPD or AHS.

Return to Table of Contents

COMBAT LIFESAVER COURSE
Instructor Course

IS0824, COMBAT LIFESAVER: BUDDY-AID TASKS

Lesson 1: PRACTICE INDIVIDUAL PREVENTIVE MEDICINE COUNTERMEASURES

Equipment and Supplies Needed: None

Personnel Needed:

Instructor (PA, 91W 20/30, or other person experienced in preventive measures).

References:

FM 21-10, Field Hygiene and Sanitation.
FM 21-11, First Aid for Soldiers.
DA Pam 40-12, Who Needs *It? *VD.

1-1. INTRODUCTION

History has often demonstrated that the course of battle is influenced more by the health of the troops than by strategy or tactics. Part of your function as a combat soldier is to recognize potentially dangerous situations and take preventive measures. This includes taking measures against potential health hazards as well as protecting yourself against enemy action. As a combat lifesaver, it is easier for you to remind a soldier in your squad or team to take preventive measures against disease and environmental injuries than it is to treat and evacuate the soldier later because he is too ill to perform his combat duties.

OBJECTIVE

TASK

Identify preventive measures for protection against arthropod bites and arthropod-borne diseases, water and food borne diseases, respiratory diseases, sexually transmitted diseases and AIDS, heat injures, and cold injuries.

CONDITIONS

Given multiple-choice items pertaining to preventive measures.

STANDARD

Score 70 or more points on the 100-point written examination.

EXPLANATION

1-2. TAKE PREVENTIVE MEASURES AGAINST BITING INSECTS

a. Apply insect repellent

Apply insect repellent (DEET) to all exposed skin other than the skin around the eyes. The repellent skin lotion is also applied two inches under the edges of the battle dress uniform.

Cover ankle and wrist areas with repellent to keep ticks and mites from creeping in openings in the uniform.

Blouse the uniform inside boots and apply repellent where they meet.

Apply clothing insect repellent to the shirt area over the shoulder blades and any other areas where the uniform fits tightly.

Reapply repellent every 6 hours if strenuous work is being performed.

Reapply repellent as soon after stream crossings as practical since much of the repellent was probably washed off.

b. Wear Uniform Properly

Wear uniform properly as the commander directs.

Wear headgear, roll sleeves down, tuck shirts and undershirts in at the waist, blouse your trousers, and lace boots completely.

Repair any tears or holes.

c. Keep Body Clean

Keep body clean by washing with soap and water daily if the tactical situation permits.

Take a full bath or shower at least once every week.

Pay special attention to hairy regions of the body where insects may deposit their eggs.

Use improvised showers if regular showering devices are not available.

Avoid bathing in stagnant water.

Use a buddy system to examine each other for the presence of ticks, lice, fleas, and mites.

d. Keep Uniform Clean

Keep uniform clean by washing it at least once each week.

If ticks, mites, or lice are a problem, uniforms should be treated with permethrin clothing repellent (IDA kit) to kill these pests.

e. Take malaria pills

Take malaria pills as directed. Soldiers in an area where malaria may be a problem will be given medication to take.

1-3. TAKE PREVENTIVE MEASURES AGAINST WATER AND FOOD BORNE

Diarrhea and dysentery are often caused by disease organism found in human and animal feces. These organisms enter the body when water or food has been contaminated with feces and are consumed. Water can be contaminated by untreated sewage. Food can be contaminated by fecal material on a person's hands or under his fingernails.

a. Disinfect drinking water with iodine tablets.

Whenever possible, obtain drinking water from a medically approved source. Always assume that water from an unapproved source is contaminated and must be disinfected before being consumed.

Fill a one-quart canteen with the cleanest, clearest water available.

Check the iodine tablets. Discard any tablets that are not uniformly steel gray, stuck together or crumbled.

Add two tablets to the water in a one-quart canteen.

NOTE: This is a change from previous doctrine in which one tablet was added if the water was clear and not cold.

NOTE: Add four tablets if using a two-quart canteen.

Replace the cap on the canteen and wait five minutes.

Shake the canteen to mix the dissolved tablets and the water.

Loosen the cap on the canteen, turn the canteen upside down, and squeeze to force water over the threads to disinfect them.

Turn the canteen upright and tighten the cap on the canteen.

Wait an additional 30 minutes before drinking the water.

b. Disinfect drinking water by boiling.

Bring the water to a rolling boil for 5 to 10 minutes.

c. Disinfect drinking water by adding bleach.

Add two drops of 5% sodium hypochlorite household bleach to one quart of water, shake, disinfect threads, and wait 30 minutes before drinking.

d. Disinfect drinking water with chlorine ampules.

Mix one ampule with 1/2 canteen **cup** of water. Pour 1/2 **capful** into your canteen. Shake, disinfect threads, and wait 30 minutes before drinking.

e. Obtain food from approved sources.

Obtain food, drinks, and ice only from sources approved by the local military medical authority.

Freezing does not kill bacteria. As the ice melts, bacteria in the ice will become active again.

f. Wash hands

Wash hands with soap and water for at least 30 seconds after using the latrine and before eating.

1-4. TAKE PREVENTIVE MEASURES AGAINST RESPIRATORY DISEASES

Respiratory diseases are usually transmitted by droplets spread through the respiratory tract: the nose, mouth, throat, or lungs of an infected person.

Avoid close contact with soldiers that have respiratory diseases whenever possible.

Encourage sick soldiers to go to sick call.

Common use of towels, eating and drinking utensils, and personal items should be discouraged.

Allow fresh air into fighting positions.

1-5. TAKE PREVENTIVE MEASURES AGAINST SEXUALLY-TRANSMITTED DISEASES (STD) AND ACQUIRED IMMUNODEFICIENCY SYNDROME (AIDS)

STD can be spread by heterosexual or homosexual activity.

The only preventive measure is to refrain from sexual contact (abstinence). By having sexual contact with only one partner who has no other sexual contacts and avoiding casual sex, the spread of STD is greatly reduced.

A latex condom provides reasonably good protection against STD for both males and females. There is no other practical mechanical device that will protect females.

AIDS (acquired immunodeficiency syndrome) is a fatal disease contracted through homosexual or heterosexual contact with an infected person or from the transfer of blood, such as by using an intravenous needle previously used by an infected person. AIDS is not transmitted through casual contact such as touching. Preventive measures against STD are also effective against AIDS. Do not use illegal intravenous drugs.

1-6. TAKE PREVENTIVE MEASURES AGAINST HEAT

Heat injuries are caused by a loss of water and/or salt in the body, usually through excessive perspiration without the water being replaced. A person wearing chemical protection (MOPP) gear is especially prone to heat injury.

a. Drink sufficient water.

When working in a hot environment, drink at least one full canteen (one quart) of cool water every hour but no more than 12 quarts daily.

When performing strenuous physical labor or working in a very hot environment, drink at least one to one and one half quarts of cool water every hour but do not exceed 12 quarts daily.

Drink small quantities of cool water frequently, even if not thirsty. When thirsty, dehydration is already present.

Drink extra water before an attack or mission or before starting hard work to keep physically strong and mentally alert.

b. Eat meals to Replace Salt.

Eat three full meals each day to replace salt lost in perspiration. Do not take salt tablets.

c. Use Work/Rest Cycles.

When performing heavy work in a hot environment (85-87.9 °F), rest about 30 minutes for each hour worked.

Take rest breaks if the tactical situation allows. If in MOPP, frequent rest breaks are mandatory.
Rest in a shaded area. Work in the shade whenever possible.

d. Wear Uniform Loosely

Wear uniform loosely at the neck, wrists, and legs to promote air circulation that helps to cool off the body.

1-7. TAKE PREVENTIVE MEASURES AGAINST COLD

Cold injuries are caused by the body loosing heat faster than it can be replaced. Preventive measures against cold are needed anytime the temperature drops below 50 F. A soldier may be unaware that he is developing cold injury. A person who had a previously cold injury has a higher-than-normal risk of suffering another cold injury.

a. Wear uniform properly.

Wear an adequate amount of properly fitting clothing in loose layers. Layering allows air to be trapped inside the clothing, which slows down the loss of body heat.

Keep clothing clean and dry.
When strenuous work is to be performed, remove some outer clothing before starting the work in order to reduce sweating and keep outer layers from becoming wet. Sweat causes loss of protective layering.

Do not remove protective chemical gear in a chemical environment.

b. Exercise

Exercise the large muscle groups to produce heat and increases blood circulation.

Change positions frequently, move feet, wiggle toes, exercise fingers, and massage face.

c. Drink water.

Dehydration is a risk in cold weather just as it is during hot weather. Dark-yellow urine or infrequent urination is an indication that not enough fluids are being consumed. Drink warm fluids when available.

d. Avoid Alcohol and Tobacco

Avoid alcoholic beverages and tobacco products since they cause the body to loose heat faster.

e. Protect feet

Carry dry pairs of socks. Change wet or damp socks as soon as practical, usually during a rest break. Body heat can dry wet socks if the socks are placed inside the shirt. Wet and cold socks will cause permanent foot damage.

Lace boots loosely.

Wash feet daily and apply foot powder.

f. Protect hands

Protect hands by wearing gloves or mittens.

Avoid direct skin contact with snow, ice, bare metal, or fuel.

g. Use a buddy system

Use a buddy system to watch one another for signs of cold injury.

1-8. CLOSING

Disease, heat, and cold can be just as deadly an enemy as the opposing military force. A soldier is just as much a casualty if he is lost to the unit due to disease as he is when he is evacuated due to a bullet wound.

This lesson is tested in the written multiple-choice examination.

Ask for questions or comments.

Return to Table of Contents

IS0824, COMBAT LIFESAVER: BUDDY-AID TASKS

Lesson 2: PERFORM FIRST AID TO CLEAR AN OBJECT STUCK IN THE THROAT OF A CONSCIOUS CASUALTY

Equipment and Supplies Needed:

Manikin, if used as a simulated casualty.

Personnel Needed:

Instructor (PA, 91W 20/30, or other person experienced in providing resuscitation).

Assistant instructor(s) (91W etc.), as needed.

References:

STP 21-1-SMCT, Soldier's Manual of Common Tasks: Skill Level 1.
FM 21-11, First Aid for Soldiers.

2-1. INTRODUCTION

An upper airway blockage can occur when food, dentures, vomitus, or other object enters a person's trachea and obstructs air flow. If the blockage is not expelled or removed and breathing restored, the casualty may become unconsciousness and die.

OBJECTIVE

TASK

Aid a conscious person with an upper airway obstruction.

CONDITIONS

Given a simulated conscious casualty (standing or sitting) with an upper airway obstruction.

STANDARD

Score a GO on the performance checklist.

EXPLANATION

NOTE TO INSTRUCTOR: Use an assistant instructor or an appropriate manikin as a simulated casualty. Demonstrate the universal sign for choking, administering abdominal thrusts, and administering chest thrusts. Do not use full force when demonstrating the thrusts on a person. Describe the procedures during your demonstration.

2-2. RECOGNIZE A PERSON WITH AN AIRWAY OBSTRUCTION

A person with an airway obstruction will automatically begin to cough or at least try to cough. In addition, he will probably clutch his throat. This clutching action is natural, but it has also been adopted as the universal distress signal for choking. This sign alerts other people that the problem is an airway obstruction rather than another problem such as a heart attack.

2-3. EVALUATE THE BLOCKAGE

a. Partial blockage with good air exchange.

Person can speak or cough forcefully. He may make a high-pitched sound between coughs.

b. Partial blockage with poor air exchange.

Person has a weak cough, makes high-pitched noises like crowing while inhaling, or has a bluish tint around his lips and fingernail beds.

If you cannot tell if the casualty has good or poor air exchange, tell him to speak. If he does not speak, assume he has an obstructed airway.

c. Complete Blockage.

Person can neither inhale nor exhale.

2-4. DETERMINE WHAT ACTIONS ARE NEEDED

a. Partial blockage with good air exchange.

Encourage the person to keep coughing until the obstruction is coughed up. Do not interfere with his efforts. Do not leave the person since the blockage could easily become more severe. Be prepared to administer manual thrusts should his condition worsen.

b. Partial blockage with poor air exchange or complete blockage.

Call for help or send someone to seek medical help and begin administering manual thrusts.

If the casualty has abdominal injuries, is noticeably pregnant, or is too large for you to reach around, administer chest thrusts. Otherwise, administer abdominal thrusts.

> **CAUTION**: The manual thrusts presented in this lesson are used with a conscious casualty who is sitting or standing. If the casualty becomes unconscious or is lying down, administer the modified thrusts described in Lesson 3. Back blows are no longer used to dislodge an airway obstruction in an adult.

2-5. ADMINISTER ABDOMINAL THRUSTS

Stand behind the casualty, insert your arms under his arms, and wrap your arms around his waist.

Make a fist with one hand and place the thumb side of your fist on the midline of the casualty's abdomen slightly above his navel (belt buckle) and well below the bottom tip of his breastbone.

Grasp your fist with your other hand.

Press your fists into the casualty's abdomen using a quick inward and upward motion, then relax the hold.

Administer an abdominal thrust every 4 or 5 seconds until the obstruction is expelled or the casualty becomes unconscious.

If the casualty looses consciousness, move backward, lower the casualty to the ground, and try to open his airway by lifting the tongue and performing a finger sweep. (See lesson 3.)

Then, if necessary, begin administering mouth-to-mouth resuscitation.

The sequence of abdominal thrusts, a finger sweep, and attempts at ventilation should be repeated as long as necessary.

2-6. ADMINISTER CHEST THRUSTS

Stand behind the casualty, place your arms under his armpits, and encircle his chest.

Make a fist with one hand and place the thumb side of your fist on the center of the casualty's breastbone (sternum).

Grasp your fist with your other hand.

Thrust inward so that the sternum is depressed about 1 1/2 to 2 inches; then relax the hold.

> **CAUTION:** If the casualty is a child (8 years old or less), the sternum should be depressed only 1 to 1 1/2 inches.
>
> A thrust delivered directly to the ribs or to the bottom of the sternum can result in the ribs or the xiphoid process (a small bone at the bottom of the sternum) being fractured and puncturing internal organs such as the lungs and heart.

Administer a chest thrust every 4 or 5 seconds until the obstruction is expelled or the casualty becomes unconscious.

If the casualty looses consciousness, move backward, lower the casualty to the ground, and try to open his airway by lifting the tongue and performing a finger sweep. (See lesson 3.)

Then, if necessary, begin administering mouth-to-mouth resuscitation.

The sequence of chest thrusts, a finger sweep, and attempts at ventilation should be repeated as long as necessary.

2-7. CLOSING

Quick action can result in saving a person's life. Even if the obstruction is expelled, medical personnel should still examine him since the object may have damaged his throat.

Ask for questions or comments.

2-8. STUDENT PRACTICE AND EXAMINATION

Have students pair off and practice administering abdominal and chest thrusts. Caution students to only simulate the thrusts and to not use full force. Observe the students and correct any errors noted.

This lesson is tested using the performance checklist in the student examination booklet. (The basic checklist is shown on the following pages for your convenience.) The examination may be administered at the end of the practice session.

Return to Table of Contents

PERFORM FIRST AID TO CLEAR AN OBJECT STUCK IN THE THROAT OF A CONCIOUS CASUALTY

VERSION 1: Instruct the student to use abdominal thrusts.

VERSION 2: Instruct the student to use chest thrusts.

NOTE TO EVALUATOR: Have an assistant or another student acting as the simulated casualty. The assistant should be standing (sitting if he is much taller than the student). You may rephrase the question or ask the student to clarify his answer if his answer is not fully acceptable. You will need to signal the assistant when to give the universal distress signal for choking.

Situation

TELL THE STUDENT: "In order to pass this test, you must perform the techniques for clearing an airway obstruction from the throat of a standing (sitting) casualty using (abdominal/chest) thrusts. I will provide additional instructions and ask questions as the evaluation proceeds. Do not use full force when administering the thrusts. Begin when the casualty gives the universal distress signal for choking. Assume that the casualty shows signs of complete airway blockage."

	GO	NO GO
Responds to universal distress signal for choking.	____	____
Stands behind casualty.	____	____
ABDOMINAL THRUSTS		
Inserts arms under casualty's arms and around casualty's waist.	____	____
Places fist on midline slightly above navel.	____	____
Covers fist with other hand.	____	____
Presses fists into abdomen with a quick inward, upward motion [full force not applied], then relaxes the hold.	____	____
CHEST THRUSTS		
Inserts arms under casualty's armpits and around casualty's chest.	____	____
Places fist on center of casualty's breastbone.	____	____
Covers fist with other hand.	____	____
Depresses sternum [full force not applied]; then relaxes the hold.	____	____
Administers thrusts at a rate of one thrust every 4 or 5 seconds.	____	____

	GO	NO GO
TELL THE STUDENT: "Stop administering thrusts. Now I want you to answer some questions."		
ASK THE STUDENT: "What should you do if the casualty looses consciousness before the obstruction is expelled?"		
Answer. Lay the casualty on his back and begin performing mouth-to-mouth resuscitation.	____	____
ASK THE STUDENT: "When are chest thrusts preferred to abdominal thrusts?"		
Answer: When the casualty has abdominal injuries, is pregnant, or is too large to reach around. (Two of the three is an acceptable response.)	_____	____

OVERALL EVALUATION	GO	NO GO
(A no-go on any step gives an overall evaluation of no-go.)	____	____

Return to Table of Contents

IS0824, COMBAT LIFESAVER: BUDDY-AID TASKS

Lesson 3: PERFORM MOUTH-TO-MOUTH RESUSCITATION

Equipment and Supplies Needed:

Manikin, if used as a simulated casualty.

Personnel Needed:

Instructor (PA, 91W 20/30, Health Care Specialist or other person experienced in providing resuscitation).

Assistant instructor(s) (91W etc.), as needed.

References:

STP 21-1-SMCT, Soldier's Manual of Common Tasks: Skill Level 1.
FM 21-11, First Aid for Soldiers.
"Guidelines for Cardiopulmonary Resuscitation and Emergency Cardiac Care," The Journal of the American Medical Association, Volume 268, Number 16 (October 28, 1992) pp. 2171-2302.

3-1. INTRODUCTION

Respiration must be restored to an unconscious casualty who is not breathing. Speed is critical in restoring respiration. Checking and restoring respiration takes priority over any other injuries the casualty may have suffered. The brain can be injured if without oxygen for as little as four minutes.

Do not perform mouth-to-mouth or mouth-to-nose resuscitation in a chemical environment (chemical agents present).

OBJECTIVE

TASK

Restore respiration by opening the airway, performing manual thrusts and finger sweeps to remove airway obstructions, and administering mouth-to-mouth (or mouth-to-nose) resuscitation.

CONDITIONS

Given a simulated nonbreathing casualty.

STANDARD

Score a GO on the performance checklist.

EXPLANATION

NOTE TO INSTRUCTOR: Use an assistant instructor or an appropriate manikin as the simulated casualty. Demonstrate the procedures discussed in this lesson. Describe the procedures during your demonstration. If a person is used as the simulated casualty, simulate the finger sweep and do not use full force when performing the modified abdominal and modified chest thrusts.

3-2. CHECK FOR RESPONSIVENESS

NOTE TO INSTRUCTOR: Position assistant instructor or manikin in prone position, then begin the demonstration.

Gently shaking the person's shoulder and call out, "Are you OK?" If the casualty does not respond, call for help and begin resuscitation procedures.

If you come upon a casualty who is in a dangerous area (under hostile fire, near a burning vehicle, etc.), remove the casualty (and yourself) from the danger before beginning mouth-to-mouth resuscitation.

3-3. POSITION THE CASUALTY FOR MOUTH-TO-MOUTH RESUSCITATION

Position the casualty on his back and on a flat, firm surface.

If the casualty is on his stomach, kneel at his side, grasp his clothing at his far shoulder and hip, pull gently, and roll his body toward you.

> **CAUTION:** If a spinal injury is suspected, have a helper support the casualty's head and neck as you gently turn the casualty's trunk and legs.

3-4. OPEN THE CASUALTY'S AIRWAY

The most common cause of airway blockage in an unconscious casualty is the casualty's tongue. Moving the tongue away from the trachea and performing a quick finger sweep may result in the casualty's resuming breathing on his own. (Learning Event 6 has more on the finger sweep.)

a. Head-Tilt/Chin-Lift

Use the head-tilt/chin-lift method unless you suspect that the casualty has suffered a fractured neck or a severe head injury.

Kneel near the casualty's shoulders.

Place one of your hands on the casualty's forehead and apply firm, backward pressure with your palm to tilt the casualty's head back.

Place the fingertips -- not your thumb -- of your other hand under the tip bony part of the casualty's lower jaw. The fingertips should not press deeply into the soft tissues under the chin since the pressure could make breathing difficult.

Lift the chin forward until the upper and lower teeth are <u>almost</u> brought together. The mouth should <u>not</u> be closed.

If needed, depress the casualty's lower lip slightly with the thumb to keep his mouth open.

b. Jaw Thrust

Use the jaw thrust if you suspect that the casualty has suffered a fractured neck or a severe head injury. The jaw thrust keeps movement of the neck to a minimum.

Kneel behind the casualty's head and rest your elbows on the surface on which the casualty is lying.

Place one hand on each side of the casualty's head and grasp the angles of the lower jaw with your fingertips.

Place your thumbs on the jaw just below the level of the teeth.

Lift with both hands to move the jaw forward and upward.

If the casualty's lips are still closed after the jaw has been moved forward, retract the lower lip with your thumbs.

3-5. CHECK FOR BREATHING

Place your ear over the casualty's mouth and nose with your face toward the casualty's chest. Maintain the open airway (head-tilt/chin-lift or jaw thrust) during your check.

Look for the rise and fall of the casualty's chest and abdomen.

Listen for sounds of breathing.

Feel for his breath on the side of your face.

The examination process should take 3 to 5 seconds.

If the casualty is breathing, keep his airway open and proceed with your evaluation.

If he is not breathing or breathing weakly, start mouth-to-mouth resuscitation.

3-6. INITIATE MOUTH-TO-MOUTH RESUSCITATION

a. Maintain an open airway

Use the head-tilt/chin-lift or jaw thrust.

b. Close the casualty's nose by gently pinching the casualty's nostrils shut with the thumb and index finger of the hand on the casualty's forehead.

c. Administer two full breaths

Administer two full breaths to see if the casualty's airway is actually open. If the airway is open, the casualty's chest will rise. Administering the two ventilations should take 2 to 3 seconds.

Open your mouth wide and take a deep breath.

Seal your mouth over the casualty's mouth.

Blow into the casualty's mouth. Make sure air does not escape.

As you blow, observe the casualty's chest.

Quickly break the seal, take another deep breath, seal your mouth over the casualty's mouth, and blow.

Break the seal over the casualty's mouth and release his nose. This will allow the casualty's body to exhale.

If you cannot seal off the casualty's nose or if the casualty has injuries to his mouth or jaw area that prevent you from administering mouth-to-mouth resuscitation, administer mouth-to-nose resuscitation instead. Close the casualty's mouth so air will not escape, seal your mouth over the casualty's nose, and blow the two breaths (ventilations) into his nostrils.

Maintain an open airway using the head-tilt/chin-lift or jaw thrust.

Close the casualty's mouth so air will not escape.

Administer two full breaths to see if the casualty's airway is actually open. If the airway is open, the casualty's chest will rise. Administering the two ventilations should take 2 to 3 seconds.

Open your mouth wide and take a deep breath.

Seal your mouth over the casualty's nose.

Blow into the casualty's nose. Make sure air does not escape.

Watch the casualty's chest to see if it rises.

Quickly break the seal, take another deep breath, seal your mouth over the casualty's nose, and blow.

Break the seal over the casualty's nose and open his mouth. This will allow the casualty's body to exhale.

d. Evaluate Effectiveness of the Ventilations

If the casualty begins breathing on his own, check the casualty for injuries. Monitor the casualty in case his breathing stops.

If air goes in and out of the casualty's lungs, but he does not start breathing on his own check his carotid pulse.

NOTE TO INSTRUCTOR: State that this procedure will be covered later. Assume that the casualty's airway is blocked (chest did not rise) and the airway must be cleared before checking for a pulse.

If the casualty's chest did not rise and fall, open the casualty's airway more and administer two full breaths again. If the casualty's chest still does not rise, administer finger sweeps and modified thrusts to unblock his airway.

3-7. PERFORM A FINGER SWEEP

Do not use the finger sweep technique if the casualty is conscious. The finger sweep can trigger a conscious casualty's "gag reflex" and cause him to vomit.

NOTE TO INSTRUCTOR: If a person is used as the casualty, simulate the sweep.

Open the casualty's mouth. If the casualty's mouth does not open readily, cross your finger and thumb and push his teeth apart.

If you can see a foreign object or strongly suspect the presence of a foreign object, perform a finger sweep.

Grasp the casualty's tongue and lower jaw between your thumb and fingers and lift the jaw.

CAUTION: Take care to avoid forcing the object deeper into the casualty's airway.

Insert the index finger of your free hand down along the inside casualty's cheek to the base of his tongue and sweep the throat with a "hooking" motion.

Push the object to the side of the casualty's throat, then pull the object from the casualty's throat.

Try to administer two full breaths again and check for breathing.

If the casualty is breathing on his own, continue your evaluation.

If the casualty's chest rises and falls but he does not breathe on his own, check his carotid pulse.

If you are still unable to ventilate the casualty, perform modified manual thrusts.

3-8. ADMINISTER MODIFIED ABDOMINAL THRUSTS

NOTE TO INSTRUCTOR: State that modified abdominal thrusts and modified chest thrusts can also be used to remove an airway obstruction from a conscious casualty who is lying down rather than standing or sitting.

A modified abdominal thrust is the preferred thrust unless the casualty has a serious abdominal wound, is noticeably pregnant, or is extremely overweight.

Kneel astride the casualty's thighs.

Place the heel of one hand against the midline of the casualty's abdomen slightly above the navel (belt buckle) and well below the tip of the breastbone (xiphoid process).

Place the heel of your other hand on top of the first hand and point your fingers toward the casualty's head.

Press into the abdomen using a quick forward (inward) and upward thrust by locking your elbows and shifting your body weight forward.

Release the pressure on the casualty's abdomen by shifting your body weight backward.

If the obstruction has been dislodged, perform a finger sweep to remove the obstruction, administer two full breaths, and check for breathing.

If the obstruction was not dislodged, administer another abdominal thrust.

If you perform six to ten abdominal thrusts without expelling the obstruction, call for help again, open the airway, and administer two full breaths. If the casualty's chest does not rise during the ventilations, perform a finger sweep and administer additional abdominal thrusts. Repeat the cycle until the casualty's airway is open.

If the casualty vomits, turn him onto his side and use a quick finger sweep to remove vomitus from his mouth. Then administer ventilations again.

3-9. ADMINISTER MODIFIED CHEST THRUSTS

The chest thrust is used to remove an airway obstruction in an unconscious casualty with a serious abdominal wound or who is noticeably pregnant or extremely overweight.

Kneel close beside the casualty's chest.

Locate the lower edge of the casualty's rib cage.

Run the fingers of your hand nearest the casualty's feet along the lower edge of the rib cage until you come to the notch where the rib meets the breastbone at the center of the lower portion of the casualty's chest.

Place your middle finger (same hand) on the notch; then place your index finger next to your middle finger.

Place the heel of your other hand on the casualty's breastbone next to and above (toward the casualty's head) your two fingers.

Make sure the heel of your hand is on the breastbone and not resting on the ribs.

Remove your fingers from the notch area and place that hand on top of the hand on the compression site. Either extend or interlace your fingers.

Straighten your arms, lock your elbows, and position your shoulders directly above your hands.

Using the weight of your body, apply enough pressure straight down to depress the casualty's breastbone 1 1/2 to 2 inches. (If casualty is a child 8 years or younger, depress the breastbone 1 to 1 1/2 inches.)

Do not bend your elbows, rock, or allow your shoulders to sag.

Release the pressure by shifting the weight of your body backward.

Do not remove your hands from the compression site. If you remove your hands from the site, repeat the procedures for locating the compression site. Delivering a thrust at the wrong compression site can cause injury to the casualty.

Release the pressure by shifting the weight of your body from your arms. Do not remove your hands from the compression site.

If the obstruction has been dislodged, perform a finger sweep to remove the obstruction, administer two full breaths, and check for breathing.

If the obstruction was not dislodged, administer another chest thrust.

If you perform 6 to 10 thrusts without expelling the obstruction, call for help again, open the airway, and administer two full breaths. If the chest does not rise during the ventilations, perform a finger sweep and administer additional chest thrusts. Repeat the cycle until the casualty's airway is open.

3-10. CHECK FOR PULSE

After you have ensured that the casualty's airway is open by successfully delivering two full breaths, check for a pulse.

Slide your index and middle finger, not your thumb, along the side of the windpipe next to the Adam's apple (larynx) until you locate the carotid artery in the groove along the windpipe.

Gently press on the artery with your fingers for 5 to 10 seconds and feel for pulse.

If a pulse is found, continue with mouth-to-mouth or mouth-to-nose resuscitation.

If no pulse is found, seek medical help immediately.

NOTE TO INSTRUCTOR: Cardiopulmonary resuscitation (CPR) is not a combat lifesaver skill since it is seldom used during combat. A combat lifesaver that knows CPR should administer CPR rather than immediately seeking medical help. If another person is available, that person can be sent to get medical help.

3-11. CONTINUE MOUTH-TO-MOUTH RESUSCITATION

If the casualty's airway is open, he has a pulse and he is not breathing on his own continue to administer ventilations.

Open the casualty's airway.

Take a deep breath.

Pinch the casualty's nostrils closed.

Seal your mouth over the casualty's mouth.

Blow the breath into the casualty's lungs. Observe the rising of the casualty's chest to ensure that the ventilation is effective.

Break your seal over the casualty's mouth and release his nose. Observe the casualty's chest fall and listen for exhale.

If the chest does not rise and fall, reposition his airway (tilt head back more) and try again until the chest rises and falls.

Repeat ventilations at the rate of one ventilation (breath) every 5 seconds (10-12 ventilations per minute).

You may need to take a breath between ventilations.

After one minute (10-12 ventilations), stop administering ventilations and check the carotid pulse again. Observe for spontaneous breathing (chest rising and falling) as you feel for the pulse. The procedure should take 3 to 5 seconds.

If the casualty has no pulse, seek medical help.

If the casualty has a pulse and is breathing on his own, continue your evaluation.

If the casualty has a pulse but is not breathing on his own; continue to administer ventilations at the rate of one ventilation every 5 seconds. Continue to check the casualty's pulse after every 10-12 ventilations.

Continue administering mouth-to-mouth resuscitation until:

The casualty begins breathing on his own.

You are relieved by a qualified person.

You must seek medical help (no pulse).

You must continue with your combat duties.

You are too exhausted to continue.

3-12. MONITOR THE CASUALTY

Once you have established that the casualty is breathing on his own, continue to monitor the casualty's breathing. Ensure that the casualty's airway remains open. If breathing difficulties arise, call for help and repeat the steps for clearing the airway and performing mouth-to-mouth resuscitation, as needed.

Have a medical person examine the casualty even if he appears to recover fully.

3-13. CLOSING

Mouth-to-mouth resuscitation is used to restore breathing to a casualty whose heart is beating, but who is not breathing. If the casualty's heart is not beating, that is, no pulse is present; cardiopulmonary resuscitation needs to be administered. CPR is not part of the combat lifesaver program.

Ask for questions or comments.

3-14. STUDENT PRACTICE AND EXAMINATION

Have students practice administering modified abdominal and chest thrusts, finger sweeps, mouth-to-mouth resuscitation and mouth-to-nose resuscitation on a manikin. If manikins are not available, have students pair off and practice administering modified abdominal and chest thrusts. Caution students to only simulate the thrusts and do not use full force. Observe the students and correct any errors noted.

This lesson is tested using the performance checklist in the student examination booklet. (The basic checklist is shown on the following pages for your convenience.) The examination may be administered at the end of the practice session.

PERFORMANCE CHECKLIST LESSON 03
PERFORM MOUTH-TO-MOUTH RESUSCITATION

VERSION 1: Instruct the student to use the head-tilt/chin-lift method of opening airway and modified abdominal thrusts.

VERSION 2: Instruct the student to use the jaw thrust method of opening airway and modified abdominal thrusts.

VERSION 3: Instruct the student to use the head-tilt/chin-lift method of opening airway and modified chest thrusts.

VERSION 4: Instruct the student to use the jaw thrust method of opening airway and modified chest thrusts.

NOTE TO EVALUATOR: Use a manikin as the casualty. If a manikin is not available, have an assistant be the simulated casualty. If a person is used as the casualty, caution the student to only simulate thrusts and finger sweeps. If a manikin is used, cleanse the manikin's mouth and nose area with bleach before each student begins. Student responses to questions do not have to be exact. Decide which version will be used before giving instructions to the student. You may rephrase the question or ask the student to clarify his answer if his answer is not fully acceptable.

Situation

TELL THE STUDENT: "You have just found a casualty who appears to be unconscious. In order to pass this test, you must perform mouth-to-mouth resuscitation. Use the (head-tilt/chin-lift/jaw thrust) and modified (abdominal/chest) thrusts."

[If manikin is not used: "Simulate administering finger sweeps. Do not use full force when administering modified thrusts."]

"I will provide additional instructions and ask questions as the evaluation proceeds. Begin by checking the casualty for responsiveness. Begin now."

	GO	NO GO
Checks for responsiveness. (Shakes shoulder, asks, "Are you okay?", etc.)	____	____
Positions casualty in supine position (if not already in that. position)	____	____
Performs quick finger sweep.	____	____
Opens airway using assigned method.	____	____
HEAD-TILT CHIN-LIFT		
Places one hand on casualty's forehead and presses with palm of hand to tilt head back.	____	____
	GO	NO GO

Places fingertips of other hand under tip of casualty's jaw and lifts jaw forward. _____ _____

JAW THRUST:

Rests elbows on surface on which casualty is lying. _____ _____

Grasps angles of casualty's jaw (one hand on each side) and lifts jaw forward. _____ _____

Checks casualty for breathing (looks for chest rising and falling or listens for breathing or feels with cheek for air flow). _____ _____

Seals nostrils closed and seals mouth over casualty's mouth while maintaining open airway. _____ _____

Delivers two full breaths. _____ _____

Releases casualty's nostrils and breaks seal over mouth. _____ _____

TELL THE STUDENT: "The casualty's airway is blocked. Attempt to clear his airway by administering a finger sweep."

Grasps tongue and lower jaw between thumb and index finger and lifts jaw open. _____ _____

Inserts index finger of other hand along the inside of cheek to base of tongue and uses a hooking motion to remove any visible obstruction. _____ _____

TELL THE STUDENT: "The casualty's airway is still blocked. Attempt to clear his airway by administering modified (abdominal/chest) thrusts and additional finger sweeps."

MODIFIED ABDOMINAL THRUSTS

Kneels astride the casualty's thighs. _____ _____

Places heel of one hand on the midline just above casualty's navel. _____ _____

Places heel of other hand on top of first. _____ _____

Delivers forward, upward thrust; then relaxes. _____ _____

MODIFIED CHEST THRUSTS

Kneels beside casualty's chest. _____ _____

	GO	NO GO
Locates compression site by running fingers along bottom of rib cage to notch where rib and sternum meet and places heel of other hand on sternum one finger width above notch. Places heel of first hand on second hand.	_____	_____
Positions shoulders directly over the compression site.	_____	_____
Depresses sternum 1 1/2 to 2 inches [simulate if person used as casualty], then relaxes. Palm and fingers do not press on the chest.	_____	_____

NOTE TO EVALUATOR: Allow student to perform three to five thrusts; then give additional instructions.

TELL THE STUDENT: "The blockage seems to be dislodged. Performa finger sweep to remove the obstruction."

Performs finger sweep by grasping tongue and lower jaw between thumb and index finger, lifting jaw, and inserting index finger of other hand to remove obstruction.	_____	_____

TELL THE STUDENT: "The obstruction has been removed. Administer two ventilations to see if the airway is open."

Repeats attempt to ventilate casualty.	_____	_____

TELL THE STUDENT: "The casualty's airway is now open, but the casualty is not breathing. Proceed."

Checks carotid pulse with fingertips (not thumb) along groove next to larynx.	_____	_____

TELL THE STUDENT: "The casualty still has a pulse. Proceed."

Ventilates the casualty at the rate of one cycle (deep breath, seal nose and mouth, blow, break seal) every 5 seconds (approximately).	_____	_____

NOTE TO EVALUATOR: Allow student to perform at least three ventilations; then give additional instructions.

TELL THE STUDENT: "Stop administering mouth-to-mouth resuscitation."

ASK THE STUDENT: "When would you check the casualty's pulse again?"

Answer. After one minute. Every 10-12 breaths. (either response acceptable)	_____	_____

OVERALL EVALUATION	GO	NO GO
(A no-go on any step gives an overall evaluation of no-go.)	_____	_____

Return to Table of Contents

IS0824, COMBAT LIFESAVER: BUDDY-AID TASKS

Lesson 4: PERFORM FIRST AID FOR BLEEDING OF AN EXTREMITY

Equipment and Supplies Needed:

Manikin, if used as a simulated casualty.

Scissors.

Field dressings.

Muslin bandages or improvised wad and bandage.

Old clothing that can be cut, if available.

Stick (rigid object).

Padding (shirt sleeve etc).

Personnel Needed:

Instructor (PA, 91W 20/30, or other person experienced in measures to control bleeding).

Assistant instructor(s) (91W etc.), as needed.

References:

STP 21-1-SMCT, Soldier's Manual of Common Tasks: Skill Level 1.
FM 21-11, First Aid for Soldiers.

4-1. INTRODUCTION

If a casualty is loosing blood from a wound, you must take measures to control the bleeding. A field dressing can be applied to any wound that is bleeding heavily. If the wound is on an arm or leg, a pressure dressing can also be applied. If the bleeding still doesn't stop, a tourniquet can be placed around an upper arm or thigh, then tightened to stop the flow of blood below the band.

OBJECTIVE

TASK
Apply a field dressing, elevation, manual pressure, a pressure dressing, and a tourniquet, as needed, to a wound on a casualty's limb.

CONDITIONS
Given a simulated casualty with bleeding from a limb and needed supplies.

STANDARD
Score a GO on the performance checklist.

EXPLANATION

NOTE TO INSTRUCTOR: Use an assistant instructor or an appropriate manikin as a simulated casualty. Demonstrate the procedures discussed in this lesson on the simulated casualty. Describe the procedures during your demonstration.

4-2. EXPOSE THE WOUND

NOTE TO INSTRUCTOR: Make a mark representing the wound on the middle of the casualty's lower leg. Position the simulated casualty in a supine position.

> If you are in a chemical environment, do not expose the wound. Place the dressing over the wound and protective clothing and evacuate the casualty.

Cut (with scissors), tear, push, and/or lift the casualty's clothing from the area around the wound.

> If clothing is stuck to the wound area cut around the stuck material and leave that part of the clothing stuck to the wound.

Expose the entire wound area so you can see the full extent of the injury.

Do not remove objects from the wound.

Look for both entry and exit wounds.

4-3. APPLY AND SECURE FIELD DRESSING

Use the casualty's field dressing.

> If no field dressing is available, improvise a dressing and bandage using the cleanest cloth available.
>
> If an impaled object is sticking out of the wound, stabilize the object with bulky dressing made from the cleanest material available. Then apply a bandage over the dressing.

Tear the plastic envelope of the field dressing and remove the field dressing, which is wrapped in paper.

Twist the paper wrapper until it breaks or tear it open.

Remove the field dressing.

Grasp the folded bandages/tails with both hands.

Hold the field dressing above the exposed wound with the white side of the dressing material toward the wound.

Pull on the tails so the dressing opens and flattens.

> Do not touch the white sterile side of the dressing.

Place the dressing (white side) on the wound.

Place one hand on top of the dressing to hold the dressing in place.

If the casualty conscious have him hold the dressing in place while you secure it.

Wrap one of the bandages around the injured limb with your free hand. As you wrap, cover one of the exposed sides of the dressing with the bandage. Bring the tail back over the dressing.

Wrap the other bandage around the injured limb in the opposite direction. As you wrap, cover the remaining exposed side of the dressing with the bandage. Bring the tail back to the dressing.

Tie the tails into a nonslip knot over the outer edge of the dressing, not over the wound itself. The bandage should be tight enough to keep the dressing from slipping, but not tight enough to interfere with blood circulation. You should be able to slip two fingers under the knot.

Check the circulation below the bandage.

If the area below the bandage previously had adequate blood circulation but is now cool to the touch, bluish, or numb or if a pulse can not be detected below the bandage, the bandage may be interfering with blood circulation. Loosen and retie the tails without disturbing the dressing.

Recheck the circulation. If circulation is not restored, evacuate the casualty.

Do not remove the dressing from the wound. Removing the dressing could interfere with any clot that has begun to form.

4-4. APPLY MANUAL PRESSURE

Apply direct pressure over the dressing with your hand.

If possible, maintain this pressure for 5 to 10 minutes. The casualty may be able to apply the manual pressure himself.

If the limb is elevated, apply manual pressure and elevation at the same time.

4-5. ELEVATE THE INJURED LIMB

Examine the injured extremity for fractures before elevating the limb. If a fracture is suspected, do not elevate the wound until the limb has been splinted.

Elevate the injured limb above the level of the casualty's heart.

Elevate a leg by placing the foot and ankle on a pack, log, rock, or other object.

Elevate an arm by placing the forearm on the casualty's chest if lying on his back or by placing the wrist on top of the casualty's head if he is sitting.

4-6. APPLY A PRESSURE DRESSING

A pressure dressing is applied only to a wound on an extremity (arm or leg).

If blood continues to seep from the dressing applied to a limb, apply a pressure dressing.

Place a wad of material (folded muslin bandage) on top of the dressing and directly over the wound.

Place a muslin bandage folded into a cravat over the wad and wrap the cravat tightly around the limb.

Tie the ends of the cravat in a nonslip knot directly over the wound. You should be able to insert the tip of one finger under the knot.

Check the circulation below the pressure dressing.

If the area below the pressure dressing previously had adequate blood circulation but is now cool to the touch, bluish, or numb or if a pulse can no longer be detected below the pressure dressing, loosen and retie the tails. This should not disturb any blood clot forming under the dressing.

Recheck the circulation. If circulation is not restored, evacuate the casualty.

Apply manual pressure over the pressure dressing.

If the wound continues to bleed, apply a tourniquet.

4-7. DETERMINE WHEN A TOURNIQUET IS NEEDED

Needed for a complete amputation of the upper arm, forearm, thigh, or lower leg (limb has been completely severed).

Apply tourniquet to amputated limb without applying field and pressure dressings.

Apply even if stump is not bleeding heavily.

Do not apply for amputation of a part of a hand or part of a foot. Bleeding from these wounds can be controlled by a pressure dressing.

Needed if the bleeding from a limb is severe and cannot be stopped by the application of a field dressing, manual pressure, elevation, and pressure dressing.

4-8. GATHER MATERIALS FOR MAKING A TOURNIQUET

a. Tourniquet Band

Fold muslin bandage or other strong, pliable material into a cravat at least two inches wide.

Do not use wire or shoestrings for a tourniquet band.

b. Rigid Object

A rigid object, usually a stick, is used to tighten the tourniquet.

c. Securing Materials (if needed)

Additional cravat or securing material may be needed to secure the rigid object if the tourniquet band is not long enough.

d. Padding

Soft, smooth material to place between the limb and the tourniquet band. The casualty's shirt sleeve or trouser leg can be used.

4-9. SELECT A TOURNIQUET SITE

Select an upper arm or thigh site. If the wound is in the upper arm or thigh, select a site that is two to four inches above the edge of the wound or amputation site. If the wound is in the lower extremity, the ideal site is still the upper arm and thigh just above the joint (elbow or knee).

Do not apply a tourniquet band over a joint or a fracture site.

4-10. APPLY A TOURNIQUET

Place padding around the limb where the tourniquet band will be applied to protect the skin from being pinched and twisted when the band is tightened.

Smoothing the casualty's shirt sleeve or trouser leg over the tourniquet site is sufficient.

Place the tourniquet band material around the tourniquet site.

Tie the band with a half-knot (like first part of tying a shoestring).

Place the rigid object on top of the half-knot.

Tie a full knot that will not come undone over the rigid object.

Twist the rigid object (clockwise or counterclockwise) until the tourniquet is tight and the bright red bleeding has stopped.

Generally, darker blood is from a vein and may continue to ooze even after the tourniquet has been properly applied.

There should be no pulse below the tourniquet.

Wrap the tails of the tourniquet band around the end of the rigid object so the rigid object will not untwist, bring the tails under the limb, and tie the tails in a nonslip knot.

If the rigid object cannot be secured with the tails of the tourniquet band, wrap a piece of material around the limb below the tourniquet, wrap the material around one end of the rigid object so the tourniquet will not unwind, and tie the tails of the material in a nonslip knot.

Do not loosen the tourniquet once it is in place and has stopped the blood flow. Loosening the tourniquet band would allow the wound to start bleeding again, which could be fatal.

Do not cover the tourniquet. Leave it in full view so it can be located quickly by medical personnel.

4-11. DRESS AN AMPUTATION

If the tourniquet is applied to an amputation, protect the amputation site (wound) from further contamination.

Place a dressing made of soft, absorbent material over the end of the stump and secure the dressing with bandages.

4-12. MARK THE CASUALTY

Write a "T" and the time of application on the casualty's forehead with a pen, the casualty's blood, mud, or other substance. The "T" alerts medical personnel that a tourniquet is present.

4-13. CLOSING

Failure to control bleeding in the field is the major cause of death among casualties who could be saved. It is vital that all soldiers learn the procedures for controlling bleeding presented in this lesson.

A tourniquet is to be applied to an amputated limb (not part of a hand or foot). When the wound on the extremity does not result in amputation, a tourniquet is used only as a last resort when blood loss from the wound endangers the casualty's life and the bleeding cannot be controlled by other methods. The portion of the limb below the tourniquet may need to be amputated when the casualty reaches a medical treatment facility.

Ask for questions or comments.

4-14. STUDENT PRACTICE AND EXAMINATION

Have students pair off and practice applying a field dressing, manual pressure, elevation, a pressure dressing and a tourniquet, to a simulated wound on the arm or leg. If a manikin is used as the simulated casualty, have one student apply the tourniquet to the manikin while the other student compares his actions to the checklist in the student subcourse. If a manikin is not used, have one student be the simulated casualty; then have the students switch roles. If a person is used as the simulated casualty, tell the students to only simulate tightening the tourniquet and to not stop the flow of blood below the tourniquet band. Observe the students and correct any errors noted.

Refer to the checklist for introductory information.
This lesson is tested using the performance checklist in the student examination booklet. The basic checklist is shown on the following pages for your convenience. If a student receives a "go" on one lesson section of the checklist and a "no-go" on another section, he need only be retaught and retested on the section he failed.

Return to Table of Contents

PERFORM FIRST AID FOR BLEEDING OF AN EXTREMITY

VERSION 1: Wound on leg.

VERSION 2: Wound on forearm.

NOTE TO EVALUATOR: Use a manikin as the casualty or have an assistant or another student be the simulated casualty. Position the casualty on his back with the limb to be dressed exposed. Make a mark on the casualty's (leg/forearm) at least five inches below the joint (knee or elbow) to indicate the location of the wound. If a person is the casualty, make sure the student does not tighten the tourniquet more than is necessary to test securing the rigid object.

MATERIALS NEEDED:

Field dressing.

Materials for pressure dressing wad, pressure dressing bandage, tourniquet band, and securing materials (four muslin bandages -- two for pressure dressing, two for tourniquet).

Rigid object (stick) for tourniquet.

Padding for tourniquet (shirt sleeve or pants leg can be used).

Pack, log, or other object to elevate leg or arm.

SPECIAL GRADING INSTRUCTIONS: If the student passes the field dressing, manual pressure, elevation, and pressure dressing and fails the tourniquet, he need only be retested on the tourniquet.

Situation

TELL THE STUDENT: "In order to pass this test, you must control the bleeding of this simulated casualty using a field dressing, pressure dressing, manual pressure, elevation, and tourniquet. The wound is represented by this mark (show mark). These are your materials (indicate materials). Assume that you have already exposed the wound and determined that the casualty has blood circulation below the wound. The casualty has no broken bones. I will provide additional information on the casualty's condition and ask questions as the evaluation proceeds. Begin by applying the field dressing."

	GO	NO GO
Removes the field dressing from plastic and paper wrappers without contaminating the white side of the dressing.	____	____
Grasps tails of the field dressing with both hands, holds the dressing directly over the wound with white side down, pulls the dressing open, and places the dressing pad on the wound.	____	____

	GO	NO GO
Holds (or has casualty hold) the dressing in place and wraps tails around the injured limb, covering the exposed edges of the dressing.	_____	_____
Ties the tails into a nonslip knot over outer edge of the dressing (not over the wound).	_____	_____
Checks the casualty's circulation below the wound.	_____	_____
TELL THE STUDENT: "The casualty still has blood circulation below the wound."		
Applies direct manual pressure over the dressing (or has casualty apply pressure if able).	_____	_____
Elevates the wound.	_____	_____
ASK THE STUDENT: "The casualty is still bleeding heavily from the wound. What should you do next to control the bleeding?"		
Answer: Apply a pressure dressing.	_____	_____
TELL THE STUDENT: "Apply a pressure dressing now."		
Places wad of folded material on top of the field dressing pad directly over the wound.	_____	_____
Wraps a strip of cloth (cravat) tightly around the wad and limb.	_____	_____
Secures wad by tying tails in a nonslip knot directly over the wound.	_____	_____
Checks circulation below the injury.	_____	_____
TELL THE STUDENT: "The casualty still has blood circulation below the wound."		
ASK THE STUDENT: "The casualty is still bleeding heavily from the wound. What should you do now to control the bleeding?"		
Answer: Apply a tourniquet.	____	___
TELL THE STUDENT: "Apply a tourniquet now."		
Makes a band (cravat) at least 2 inches wide.	____	___

	GO	NO GO
Wraps the tourniquet band around the upper arm or thigh.	____	____
Has padding (trouser leg, shirt sleeve, etc.) between the tourniquet band and the skin.	____	____
Ties a half-knot, places the rigid object on top of the half-knot, and ties a full knot over the rigid object.	____	____
Twists rigid object to tighten the tourniquet band. [Simulate if person is casualty.]	____	____
TELL THE STUDENT: "Assume that the tourniquet is tight enough to stop the arterial bleeding below the band. Proceed to secure the rigid object."		
Secures rigid object using the tails of the tourniquet band or a strip of cloth (cravat) wrapped around the limb. (If tails of band are not used, the additional securing material is applied below the tourniquet band.)	____	____
Ties the tails in a nonslip knot.	____	____
Rigid object is secured (to prevent tourniquet from untwisting	____	____
ASK THE STUDENT: "What can you do to indicate to medical personnel that a tourniquet has been applied to the casualty?"		
Answer: Write a "T" and time of application on his forehead.	____	____

OVERALL EVALUATION (A no-go on any step gives an overall evaluation of no-go.)	GO	NO GO
	____	____

Return to Table of Contents

COMBAT LIFESAVER COURSE IS0826

IS0824, COMBAT LIFESAVER: BUDDY-AID TASKS

Lesson 5: PERFORM FIRST AID FOR AN OPEN CHEST WOUND

Equipment and Supplies Needed:

Manikin, if used.

Field dressings.

Tape.

Scissors.

Personnel Needed:

Instructor (PA, 91W 20/30, or other person experienced in treating wounds).

Assistant instructor(s) (91W) etc.), as needed.

References:

STP 21-1-SMCT, Soldier's Manual of Common Tasks: Skill Level 1.
FM 21-11, First Aid for Soldiers.

5-1. INTRODUCTION

If an object punctures the chest wall, permitting air to enter between the chest wall and the lung, the lung collapses. Any degree of collapse interferes with the body's ability to expand the lung and absorb oxygen. Even if one lung is collapsing, the other lung may be functioning, assuming that side of the chest is intact. The first aid procedure for a casualty with a penetrating chest wound is to prevent the lung from collapsing any more than it has already by placing an airtight seal over the wound.

OBJECTIVE

TASK

Apply a dressing to a casualty with an open chest wound.

CONDITIONS

Given a simulated casualty with an open chest wound and needed supplies.

STANDARD

Score a GO on the performance checklist.

EXPLANATION

NOTE TO INSTRUCTOR: Use an assistant instructor or an appropriate manikin as a simulated casualty. Demonstrate the procedures discussed in this lesson on the simulated casualty. Describe the procedures during your demonstration.

5-2. CHECK FOR SIGNS AND SYMPTOMS OF AN OPEN CHEST WOUND

Obvious penetration of the chest wall by a bullet, knife blade, shrapnel, or other object.

Sucking sound coming from chest wound. (An open chest wound is often called a "sucking chest wound.")

Frothy blood from chest wound. (Bubbles of blood are caused by air going in and out of the wound.)

Blood coughed up.

Shortness of breath or other difficulty in breathing.

Chest not rising normally when the casualty inhales.

Pain in the shoulder or chest area that increases with breathing.

Bluish tint to lips, inside of mouth, fingertips, or nailbeds. (The color change is caused by the decreased amount of oxygen in the blood.)

Signs of shock - Rapid and weak heartbeat.

When in doubt, treat the wound as an open chest wound.

5-3. LOCATE AND EXPOSE OPEN CHEST WOUND

Check for entry and exit wounds.

Expose the area around the open chest wound by removing, cutting, or tearing the clothing covering the wound.

If clothing is stuck to the wound cut or tear around the stuck clothing rather than removing the stuck clothing.

Do not try to clean the wound or remove impaled objects.

If you are in a chemical environment, seal and dress the wound(s) without exposing the wound(s).

Look for a pool of blood under the casualty's back and use your hand to feel for wounds.

If there is more than one open chest wound, treat the more serious (largest, heaviest bleeding) wound first.

5-4. SEAL AND DRESS THE OPEN CHEST WOUND

Since air can pass through a dressing, you must seal an open chest wound to stop air from entering the chest and collapsing the lung.

a. Open Field Dressing Wrapper

Tear open one end of the plastic wrapper of a field dressing.

Remove the inner packet.

Tear around the edges of the plastic wrapper until a flat surface is formed. Do not touch the inside surface of the plastic wrapper.

b. Have the Casualty Exhale

Tell the casualty to completely exhale and hold his breath. If possible, the casualty should hold his breath until the sealing material has been secured. Having the casualty to exhale forces some of the air out of the chest wound.

If the casualty is unconscious or cannot hold his breath, place the wrapper over the wound after his chest falls but before it rises.

c. Place Wrapper Over Wound

Place the inside surface of the plastic wrapper (the side without printing) directly over the wound. The plastic wrapper makes an airtight seal that keeps air from entering the chest cavity through the wound. Breathing can be resumed.

If the edges of the wrapper do not extend at least two inches beyond the edges of the wound, it may not form an airtight seal and may even be sucked into the wound. If the wrapper is too small, use foil, a poncho, cellophane, or similar material as the seal.

If an object is protruding from the chest wound, place airtight material around the object and stabilize the object with clean, bulky material and bandage. Do not wrap the bandages around the object.

d. Tape Wrapper in Place

Tape the top and both sides of the plastic wrapper to the casualty's chest. Leave the bottom edge untaped to form a flutter-type valve to allow air to escape through the chest wound, but keep air from entering the chest wound.

NOTE TO INSTRUCTOR: Taping the plastic wrapper is a combat lifesaver step that is not part of the normal buddy-aid task.

e. Apply the Field Dressing

Remove the field dressing from the paper wrapper.

Open the field dressing and place the white pad directly over the plastic wrapper.

Hold the dressing in place with one hand or have the casualty hold the dressing in place while you secure it.

f. Secure Dressing

Grasp one tail, slide it under the casualty, and bring it back over the dressing.

Wrap the other tail around the casualty in the opposite direction and bring it back over the dressing.

Tighten the tails and tie them with a nonslip knot over the center of the dressing when the casualty exhales. The bandages should keep the dressing and sealing material from slipping, but should not interfere with breathing.

If the casualty is unconscious, tie the knot after his chest falls.

If an object is protruding from the wound, tie the knot beside the object, not on it.

If the sealing material slips while the dressing is being applied or secured, repeat the procedures.

g. Seal and Dress Other Open Chest Wounds

If both an entry wound and an exit wound are present, both wounds must be sealed in order to stop the collapse of the lung.

5-5. POSITION A CASUALTY WITH AN OPEN CHEST WOUND

Position the casualty on his side with the injured side next to the ground. (If the casualty were to lie on his uninjured side, his uninjured lung would not expand as well.)

If the casualty can breathe easier when sitting up, allow him to sit with his back against a tree or other support.

5-6. MONITOR A CASUALTY WITH AN OPEN CHEST WOUND

Seek medical help. Send someone else after help.

Treat the casualty for shock.

Evacuate the casualty as soon as possible.

If the casualty has increased difficulty in breathing, shortness of breath, or bluish tint to skin, quickly lift the sealing material from the wound, let the air escape with complete expiration, and reseal the wound.

5-7. CLOSING

Once the casualty reaches a medical treatment facility, medical personnel can remove trapped air from the casualty's chest and make the lung fully functional again.

Ask for questions or comments.

Return to Table of Contents

STUDENT PRACTICE AND EXAMINATION

If possible, have students practice sealing and dressing a simulated open chest wound on a manikin or another student. The exposing of the wound step may be skipped, if desired. Observe the students and correct any errors noted.

This lesson is tested using the performance checklist in the student examination booklet. The basic checklist is shown on the following pages for your convenience. The examination may be administered at the end of the practice session.

PERFORMANCE CHECKLIST
PERFORM FIRST AID FOR AN OPEN CHEST WOUND

VERSION 1: Casualty is conscious and can follow orders.

VERSION 2: Casualty is unconscious.

NOTE TO EVALUATOR: Have an assistant or another student be the simulated casualty. Position the casualty on his back with the chest area to be dressed exposed. Make a mark on the casualty's chest to indicate the location of the open chest wound.

Comments in brackets [ ] apply to version 1 only.

MATERIALS NEEDED

Field dressing (with plastic wrapper).
Tape.
Scissors.

Situation

TELL THE STUDENT: "In order to pass this test, you must dress the open chest wound of this simulated casualty. The wound is represented by this mark (show mark). These are your materials (indicate materials). I may ask questions as the evaluation proceeds. You have already exposed the wound. The casualty is (conscious and can follow instructions/unconscious). Begin."

	GO	NO GO
Removes the field dressing from plastic wrapper.	_____	_____
Opens plastic wrapper to create a flat surface, keeping the interior surface clean.	_____	_____
Places interior surface of plastic wrapper over wound when casualty exhales. [May ask casualty to exhale and hold breath, then apply wrapper.]	_____	_____
Tapes three sides of wrapper.	_____	_____
Applies white side of field dressing over plastic wrapper.	_____	_____
Wraps bandages around casualty's chest to secure dressing. [May ask casualty to hold dressing in position while he wraps bandage around chest.]	_____	_____
Ties tails in a nonslip knot over the center of the dressing.	_____	_____
Bandages tight enough to keep dressing in proper position without restricting casualty's breathing.	_____	_____
OVERALL EVALUATION (A no-go any step gives an overall evaluation of no-go.)	GO _____	NO GO _____

Return to Table of Contents

IS0824, COMBAT LIFESAVER: BUDDY-AID TASKS

Lesson 6: PERFORM FIRST AID FOR AN OPEN ABDOMINAL WOUND

Equipment and Supplies Needed:

Manikin, if used.

Field dressings.

Additional dressing and bandaging material for reinforcing dressings.

Personnel Needed:

Instructor (PA, 91W 20/30, or other person experienced in treating wounds).

Assistant instructor(s) (91W etc.), as needed.

References:

STP 21-1-SMCT, Soldier's Manual of Common Tasks: Skill Level 1.
FM 21-11, First Aid for Soldiers.

6-1. INTRODUCTION

An open abdominal wound can be caused by the muscular abdominal wall being penetrated by a bullet, by a stab from a knife, by an object blown from an explosion, or by falling on a sharp object.

OBJECTIVE

TASK

Identify proper procedures for treating a casualty with an open abdominal wound.

CONDITION

Given multiple-choice items pertaining to open abdominal wounds.

STANDARD

Score 70 or more points on the 100-point written pretest.

EXPLANATION

NOTE TO INSTRUCTOR: Use an assistant instructor or an appropriate manikin as a simulated casualty. Demonstrate the procedures discussed in this lesson on the simulated casualty. Describe the procedures during your demonstration.

6-2. POSITION A CASUALTY WITH AN OPEN ABDOMINAL WOUND

Position the casualty on his back with his knees up (flexed). This position helps to prevent further exposure of the abdominal organs, lessens pain, and controls shock.

6-3. DRESS AN OPEN ABDOMINAL WOUND

a. Locate and Expose Open Abdominal Wound(s)

Check the abdominal region for entry and exit wounds. Check the back using your hand to feel for wounds. Look for a pool of blood.

If more than one open abdominal wound is found, treat the more serious wound first.

Expose the area around the open abdominal wound by removing, cutting, or tearing the clothing around the wound.

If clothing is stuck to the wound cut or tear around the stuck clothing rather than removing the stuck clothing.

Do not probe, clean, or remove foreign objects from the wound.

If you are in a chemical environment, dress the wound without exposing the wound.

b. Position Dislodged Organs, If Applicable

If part of an intestine or other organ has been forced through the wound, use clean, dry material to gently lift the organ. Then position the organ on top of the casualty's abdomen.

Do not touch the exposed organ with your hands or try to push the organ back into the body.

c. Dress the Wound

Open a field dressing and place the white side of the dressing over the wound and any protruding organs.

If the field dressing is too small, use clothing, part of a blanket, elastic gauze bandages or similar clean materials as a dressing.

If an object is protruding from the wound, stabilize the object with clean, bulky material and bandages.

d. Secure the Dressing

Hold the dressing in place with one hand to keep it from slipping.

Grasp one tail and slide it under the casualty.

Reach down on the other side of the casualty; grasp the tail under the casualty, and pull.

Bring the tail up the casualty's side, over the dressing, and to the other side.

Wrap the other tail in the opposite direction.

Tie the tails in a nonslip knot on the outer edge of the dressing toward the casualty's side. Do not tie the knot over the wound site.

The bandages should be tight enough to keep the dressing from slipping. You should be able to insert two fingers between the knot and the dressing. Elastic gauze bandages over exposed abdominal organs (especially intestines) should be moistened with I.V. solutions using the appropriate tubing.

e. Dress Other Abdominal Wound(s)

If other abdominal wounds are present, dress and bandage the wounds.

f. Reinforce Dressings

If the situation allows and materials are available, cover the dressing(s) with cravats or strips of cloth. Tie the tails of the reinforcing bandages over the other edge of the field dressing (not over the field dressing knot).

Do not tie any knots over the wound site.

6-4. MONITOR A CASUALTY WITH AN OPEN ABDOMINAL WOUND

Keep the casualty in the knees-up position.

Evacuate the casualty as soon as possible.

Do not give the casualty anything to eat or drink.

If the casualty asks for water, moisten his lips with a damp cloth.

If you leave the casualty, tell him to stay on his back with his knees up.

6-5. CLOSING

The abdominal cavity contains the stomach, intestines, liver, kidneys, spleen, and several large arteries and veins. An object that punctures the muscular abdominal wall can injure organs, cause severe bleeding, and cause massive infection. The casualty must be treated at a medical treatment facility as soon as possible.

This lesson is tested in the written multiple-choice examination.

Ask for questions or comments.

Return to Table of Contents

IS0824, COMBAT LIFESAVER: BUDDY-AID TASKS

Lesson 7: PERFORM FIRST AID FOR AN OPEN HEAD WOUND

Equipment and Supplies Needed:

Manikin, if used.

Field dressings.

Personnel Needed:

Instructor (PA, 91W 20/30, or other person experienced in treating wounds).

Assistant instructor(s) (91W etc.), as needed.

References:

STP 21-1-SMCT, Soldier's Manual of Common Tasks: Skill Level 1.
FM 21-11, First Aid for Soldiers.

7-1. INTRODUCTION

A head injury may consist of a cut or bruise of the scalp, a concussion, a fracture of the skull with injury to the brain, extruding brain matter, or a combination of these injuries. If the skin has been broken, it is called an open head injury. If the skin has not been broken, it is a closed head injury. Both can be life threatening.

OBJECTIVE

TASK

Apply a dressing to a casualty with an open head wound.

CONDITION

Given a simulated casualty with an open head wound and needed supplies.

STANDARD

Score a GO on the performance checklist.

EXPLANATION

NOTE TO INSTRUCTOR: Use an assistant instructor or an appropriate manikin as a simulated casualty. Demonstrate the procedures discussed in this lesson on the simulated casualty. Describe the procedures during your demonstration.

7-2. IDENTIFY SIGNS AND SYMPTOMS OF OPEN AND CLOSED HEAD INJURIES

If the skin is broken, the head injury is "open." If the skin is not broken, the head injury is "closed." A closed head injury may be as dangerous to the casualty as an open head injury.

Visible skull fracture..

Visible brain tissue.

Deformity of the head.

Clear or bloody fluid leaking from the nose or ears.

"Black eyes" and bleeding in the whites of the eyes.

Bruising behind one or both ears.

Loss of consciousness, (either current or recent unconsciousness).

Headache, nausea, or vomiting.

Vision problems.

Staggering or dizziness.

Drowsiness.

Mental confusion.

Slurred speech.

Convulsions or twitching.

Difficulty in breathing.

Paralysis.

Size of pupils unequal.

7-3. CHECK A CASUALTY'S LEVEL OF CONSCIOUSNESS

Use the AVPU system to evaluate the casualty - A-alert; V-responds to verbal commands only; P-responds to pain only; U-unresponsive. Ask the casualty to tell you his name, where he is, the month and year, or other information which cannot be answered by a simple yes or no.

Incorrect responses, inability to answer, or changes in responses may indicate a serious head injury.

Remember to reassess the casualty at frequent intervals.

7-4. POSITION A CASUALTY WITH A HEAD INJURY

A casualty with a serious head injury could have a fractured neck. Avoid moving the casualty when possible.

Position the casualty on his side with the wound away from the ground if the casualty is choking, nauseous, vomiting, or bleeding from his mouth.

Have the casualty sit up and lean against a support such as a tree if only minor wounds are present. After the wounds are dressed, he can be positioned on his back with his head elevated slightly.

If the casualty is having convulsions, ease him to the ground and gently support his head and neck. You must also keep him from causing additional injury to himself.
Do not try to forcefully hold his arms and legs or put fingers in his mouth.

7-5. EXPOSE THE HEAD WOUND

Remove the casualty's helmet if he is still wearing it.

> Do not expose or dress the wound in a chemical environment. If the mask or hood has been breached, repair the breach with tape or wet cloth stuffing if possible.
>
> Do not attempt to clean the wound or attempt to push any brain matter back into the head.

7-6. APPLY A DRESSING TO A WOUND ON THE FOREHEAD OR BACK OF THE HEAD

Remove a field dressing from its wrappers.

Grasp a tail in each hand, hold the dressing directly over the wound with the white pad toward the wound, pull the dressing open, and place the pad directly over the wound with the bandages horizontal.

Place one hand on the dressing or have the casualty hold it in place.

Wrap one tail horizontally around the casualty's head and bring it back across and past the dressing. Angle the bandage so it will cover the top or bottom edge of the dressing.

> Do not cover the casualty's eyes or ears with the bandages.

Wrap the second tail around the head in the opposite direction.

Bring the tail across the dressing angled so it will cover the other edge (top or bottom) of the dressing.

Continue to wrap the bandage around the head again until it meets the first tail.

Tie the tails in a nonslip knot on the side of the head. The bandages should keep the dressing from slipping, but not place undue pressure on the wound.

Tuck any excess bandaging material (tails) under the bandage.

7-7. APPLY A DRESSING TO THE TOP OF THE HEAD

Remove a field dressing from its wrappers.

Grasp a tail in each hand, hold the dressing directly over the wound with the white pad toward the wound, pull the dressing open, and place the pad directly over the wound with the bandages toward the ears.

Place one hand on the dressing and grasp the near tail with the other hand.

Bring the tail down in front of the ear, under the chin, up in front of the opposite ear, over the dressing, and to a point just above and in front of the first ear (about a one and one-fourth circle).

Make sure the tail remains wide and close to the chin.

Remove your hand from the dressing and grasp the other (free) tail.

Bring that tail down the opposite side of the face in front of the ear, under the chin, and up until it meets the first tail (about a three-fourths circle).

Cross the tails so that each makes a 90? turn. The cross should be made slightly above and in front of the ear.

Bring one tail across the casualty's forehead and above the eyebrows until it is in front of the opposite ear (about a half circle).

Bring the other tail back above the ear, low behind the head at the base of the skull, and up to a point above and in front of the opposite ear where it meets the first tail.

Do not cover the casualty's eyes or ears.

Tie the tails in a nonslip knot in front of and above the ear.

Tuck in the excess material from the tails.

7-8. APPLY A DRESSING TO THE CHEEK OR SIDE OF THE HEAD

Remove a field dressing from its wrappers.

Grasp a tail in each hand, hold the dressing directly over the wound with the white pad toward the wound, pull the dressing open, and place the pad directly over the wound with the bandages vertical.

Place one hand on the dressing or have the casualty hold the dressing in place.

Bring the upper tail over the top of the head, down in front of the ear, under the chin, up the side of the face, and over the dressing to a point just above the ear (a full circle).

Bring the other tail down, under the chin, up the side of the face, in front of the ear, and over the top of the head until it meets the first tail (almost a full circle).

Make sure both tails remain wide and close to the front of the chin. Do not cover the ears if it can be avoided.

Cross the two tails just above the ear on the injured side of the face.

Bring one tail across the forehead (above the eyebrows) to a point just in front of the ear on the uninjured side of the face.

Do not cover the casualty's eyes.

Bring the other tail above the ear, low behind the head at the base of the skull, and above the other ear until it meets the first tail.

Tie the tails in a nonslip knot just above and in front of the ear on the uninjured side of the head.

Tuck in the ends of the tails.

If fluid is coming from the casualty's ear put a field dressing over the ear to protect the ear and absorb the drainage.

7-9. MONITOR A CASUALTY WITH A HEAD INJURY

Position the casualty as described in "Position A Casualty with a Head Injury".

The scalp may bleed excessively, requiring pressure to control the bleeding.

Evacuate a casualty with a serious head wound, with fluid leaking from an ear, or who does not regain consciousness soon as possible.

Check the casualty's level of consciousness every 15 minutes. If he falls asleep, awaken him to check his level of consciousness. Report your observations, including changes, to medical personnel.

Do not give the casualty anything to eat or drink.

7-10. CLOSING

A head wound may be more serious than it first appears. Medical personnel should evaluate any soldier with a head wound.

Ask for questions or comments.

7-11. STUDENT PRACTICE AND EXAMINATION

Have students pair off and practice dressing to simulated open head wounds. Observe the students and correct any errors noted.

This lesson is tested using the performance checklist in the student examination booklet. The basic checklist is given on the following pages. The examination may be administered at the end of the practice session.

Return to Table of Contents

PERFORMANCE CHECKLIST LESSON 07
PERFORM FIRST AID FOR AN OPEN HEAD WOUND

VERSION 1: Wound on forehead (casualty conscious).

VERSION 2: Wound on top of head (casualty conscious).

NOTE TO EVALUATOR: Have an assistant or another student be the simulated casualty. Have the casualty sit up. Make a mark on the casualty's head (forehead or top of head) to indicate the location of the wound.

MATERIALS NEEDED:

Field dressing.

Situation

TELL THE STUDENT: "In order to pass this test, you must dress the open head wound of this simulated casualty. The wound is here (indicate the mark on the forehead or top of the head). You have evaluated the casualty and determined the casualty has no other wounds and does not have a severe head injury. The casualty is conscious and wishes to sit up. These are your materials (indicate materials). Begin."

	GO	NO GO
Opens field dressing and places white side of dressing over the wound.	____	____
Holds dressing in place or has casualty hold dressing to keep dressing from slipping while securing dressing.	____	____
WOUND ON FOREHEAD		
Wraps tails horizontally around the head.	____	____
Top and bottom edges of the dressing covered by tails.	____	____
Tails tied in a nonslip knot on the side of the head (not over wound).	____	____
WOUND ON TOP OF HEAD		
Takes tails around head vertically in opposite directions.	____	____
Tails under chin remain wide and close to the front of the chin.	____	____
Crosses tails above and in front of one ear then takes tails around head horizontally (one on forehead, other over ear and behind base of skull).	____	____

	GO	NO GO
Ties tails in a nonslip knot on the other side of the head (side opposite from the crossed tails).	____	____
Bandages tight enough to hold dressing in place.	____	____
Bandages do not cover eyes or ears.	____	____
OVERALL EVALUATION (A no-go on any step gives an overall evaluation of no-go.)	GO ____	NO GO ____

NOTE TO INSTRUCTOR: Dressing a wound to the cheek is not covered on the examination, but is included to use as part of the practical exercise.

Return to Table of Contents

IS0824, COMBAT LIFESAVER: BUDDY-AID TASKS

Lesson 8: PERFORM FIRST AID TO PREVENT OR CONTROL SHOCK

Equipment and Supplies Needed:

Manikin, if used.

Field jacket or log.

Blankets or ponchos.

Personnel Needed:

Instructor (PA, 91W 20/30, or other person experienced in treating shock).

Assistant instructor(s) (91W etc.), as needed.

References:

STP 21-1-SMCT, Soldier's Manual of Common Tasks: Skill Level 1.
FM 21-11, First Aid for Soldiers.

8-1. INTRODUCTION

There are several causes of shock. On the battlefield, hypovolemic shock due to loss of blood from wounds or burns will be the primary type of shock present. If not properly treated, shock can be fatal. The procedures used to treat shock are also used to help prevent shock from occurring.

OBJECTIVE

TASK

Identify the procedures for preventing/controlling shock.

CONDITIONS

Given multiple-choice examination items pertaining to shock.

STANDARD

Score 70 or more points on the 100-point written examination.

EXPLANATION

NOTE TO INSTRUCTOR: Use an assistant instructor as a simulated casualty. Demonstrate the positioning procedures and other methods of controlling shock discussed in this lesson. Describe the procedures during your demonstration.

8-2. IDENTIFY THE SIGNS AND SYMPTOMS OF SHOCK

Loss of body fluids from severe bleeding, burns, vomiting, diarrhea, and severe heat illness.

Sweaty but cool (clammy) skin pale skin color, and/or blotchy or bluish skin around the mouth.

Nausea.

Anxiety (casualty restless or agitated).

Change in level of consciousness such as mental confusion.

Increased breathing rate.

Unusual thirst.

8-3. POSITION THE CASUALTY TO PREVENT/CONTROL SHOCK

Move the casualty to cover if possible.

Stop heavy bleeding and treat major wounds.

a. Normal Shock Position

Position the casualty on his back.

If possible, place a poncho or blanket under the casualty to protect him from the temperature or dampness of the ground.

Elevate the casualty's legs so his feet are slightly higher than the level of his heart. Place a small log, field pack, box, rolled field jacket, or other stable object under the casualty's feet or ankles to maintain the elevation.

If the casualty has a fractured leg, do not elevate the legs until the fracture has been splinted.

b. Shock Positions for Special Injuries

Certain casualties are not placed in the normal position for shock. Check for and splint fractured limbs before moving the casualty.

Suspected fracture of the spine. Do not move a casualty with a suspected spinal fracture or severe head wound. Do not elevate his legs.

Open chest wound. Place the casualty in a sitting position with his back to a wall, tree, or other support or lying on his injured side.

Open abdominal wound. Place the casualty on his back with his knees flexed.

Minor head wound. Place the casualty in a sitting position with his back to a wall, tree, or other support or lying on his side with the wound away from the ground.

Unconsciousness**.** Position an unconscious casualty on his side with his head turned so fluids can drain from his mouth.

8-4. TAKE ADDITIONAL MEASURES TO PREVENT/CONTROL SHOCK

a. Reassure the Casualty

Keep the casualty calm.

Tell the casualty that you are helping him.

Be confident and have a "take charge" attitude.

Do not make comments regarding the casualty's condition.

b. Loosen the Casualty's Clothing

Loosen any binding clothing, including boots, if you are not in a chemical environment.

Do not loosen or remove clothing in a chemical environment.

c. Keep the Casualty from Being Too Warm or too Cool

In warm weather, move the casualty to a shade or erect an improvised shade using a poncho and sticks or other available materials. Do not cut off air flow. Fan the casualty with a shirt or other material.

In cool weather, cover the casualty with a blanket, poncho, or other materials to keep him warm and dry. Place a poncho under the casualty to prevent chilling due to contact with cold or wet ground.

d. Seek Help or Evacuate Casualty

A combat lifesaver should administer intravenous fluids to help control shock if hypovolemic shock is present. An intravenous infusion can be started before a fracture is splinted.

Evacuate the casualty if practical.

If you leave the casualty to seek help, tell him you are going to get help and will return. Turn the casualty's head so fluids can drain from his mouth.

8-5. CLOSING

Hypovolemic shock can be fatal if fluid loss is not controlled and fluids are not replaced. Administering fluids by intravenous infusion is one of the primary combat lifesaver skills and will be covered in the medical phase of the course.

This lesson is tested on the written examination.

Ask for questions or comments.

Return to Table of Contents

IS0824, COMBAT LIFESAVER: BUDDY-AID TASKS

Lesson 9: PERFORM FIRST AID FOR A SUSPECTED FRACTURE

Equipment and Supplies Needed:

Manikin, if used.

Field dressings.

Cravats.

Rigid objects (tree limbs).

Padding material.

Scissors and old clothing for exposing the wound step, if performed.

Personnel Needed:

Instructor (PA, 91W 20/30, or other person experienced in splinting fractures).
Assistant instructor(s) (91W etc.), as needed.

References:

STP 21-1-SMCT, Soldier's Manual of Common Tasks: Skill Level 1.
FM 21-11, First Aid for Soldiers.

9-1. INTRODUCTION

A fracture is a break in a bone. It can cause disability and even death. A closed fracture is a break in the bone without a break in the skin. An open fracture is a break in the bone with a break in the overlying skin. Dislocations and sprains are injuries to joints that are treated as though they were fractures.

OBJECTIVE

TASK

Splint a suspected fracture of the arm or leg.

CONDITION

Given a simulated casualty with a suspected fracture of the arm or leg and needed materials.

STANDARD

Score a GO on the performance checklist.

EXPLANATION

NOTE TO INSTRUCTOR: Use an assistant instructor or an appropriate manikin as a simulated casualty. Demonstrate the procedures discussed in this lesson on the simulated casualty. Describe the procedures during your demonstration.

9-2. IDENTIFY SIGNS AND SYMPTOMS OF A FRACTURED ARM OR LEG

Bone sticking through the skin.

Pain, tenderness, swelling, and/or bruise at a particular location.

Arm or leg appears shorter or is in an abnormal position (looks deformed).

Difficulty in moving an arm or leg.

> Do not have the casualty attempt to move the injured arm or leg. Rely upon what the casualty tells you.

Massive injury to an arm or leg.

"Snapping" sound may be heard by the casualty at the time of the injury.

9-3. PREPARE THE CASUALTY

a. Reassure the Casualty

Tell the casualty that you are taking care of him.

If you must leave the casualty to locate materials needed to make a splint, tell him that you will return quickly.

b. Locate Site of Fracture

Open fracture -- where the bone has broken the skin.

Closed fracture -- where the pain, tenderness, bruise, abnormal bend in arm, or other indicator is located.

c. Check Circulation Below Fracture

Indications of poor circulation include:

Lack of a pulse or a weak pulse below the fracture site.

Slow capillary fill. Press on a fingernail on the injured limb and the corresponding nail on the uninjured limb. Release both nails at the same time. Blood flow is hampered if color returns to the uninjured limb first.

Numbness or tingling.

Pale, white, or bluish-gray skin color below the fracture site.

Skin below the fracture site is cooler than the skin on the corresponding location of the uninjured limb.

If the limb has poor circulation, evacuate the casualty as soon as possible.

d. Loosen Clothing

Loosen any clothing that is tight or which binds the casualty.

Boots should not be removed unless they are needed to immobilize an injured neck or unless there is actual bleeding from the foot.

Do not remove or loosen any of the casualty's protective clothing if you are in a chemical environment.

e. Remove Jewelry

Rings or other jewelry on the limb could become stuck and interfere with blood circulation if the limb swells. Remove any jewelry on the casualty's injured limb and put it into his pocket. Tell him what you are doing.

f. Dress Wounds

Dress any open wounds (including burns) on the injured limb before applying the splint.

Do not attempt to push the bone back under the skin. Cover exposed bone with a dressing.

Do not attempt to straighten or realign the injured limb.

9-4. GATHER SPLINTING MATERIALS

a. Rigid Objects

Tree branches, poles, boards, sticks, or other rigid objects can be used.

The casualty's own chest can be used to immobilize a fractured arm and an uninjured leg can be used to immobilize a fractured leg.

b. Padding.

Blankets, jackets, ponchos, extra clothing, shelter halves, leafy plants, or the casualty's trouser leg or shirt sleeve can be used.

c. Securing Materials

Cravats made from muslin bandages or other materials are preferred.

Cut or tear a square about 3 feet on each side from pliable material such as a shirt or sheet if muslin bandages are not used.

Fold the square along the diagonal to form a triangle.

Cut along the fold so that two triangles are formed. (Each triangle becomes a cravat.)

Fold top of the triangle down until the tip of the triangle touches the base (longest side).

Fold a second time and a third time.

Strips of clothing, belts, pistol belts, bandoleers, and similar materials can be used.

Narrow materials such as wire and cord should not be used since they could interfere with blood circulation.

9-5. SPLINT THE LIMB

Do not try to straighten or reposition the fractured limb. Splint the limb in the position you find it. Move the limb as little as possible while applying and securing the splint.

a. Position the Securing Materials

Push the cravats under natural body curvatures, then gently move the securing materials up or down the limb until they are in proper position.

Place at least one cravat (two if possible) above the fracture site and at least one cravat (two if possible) below the fracture site.

If possible, place one cravat above the upper joint, one between the upper joint and the fracture, one between the fracture and the lower joint, and one below the lower joint.

Do not place a cravat directly under the fracture site.

b. Position the Rigid Objects

If two rigid objects are available, place one on each side of the injured limb.

When possible, position the rigid objects so the joint above the fracture and the joint below the fracture can be immobilized.

Make sure the ends of the rigid objects are not pressing against the armpit or groin.

c. Apply Padding

Place **padding** between the rigid objects and the limb.

Place extra padding at bony or sensitive areas
such as the elbow, wrist, knee, ankle, groin, or armpit.

d. Secure the Rigid Objects

Wrap the cravats around the rigid objects and limb to secure the rigid objects and immobilize the limb.

Tie the ends (tails) of each cravat in a nonslip knot on the outer rigid object and away from the casualty.

The securing material should be tight enough to hold the rigid objects securely in place, but not tight enough to interfere with blood circulation.

e. Check Circulation

Observe the limb below the cravats for signs of impaired circulation as you secure the rigid objects. If possible, check the circulation after each cravat is tied. Recheck the limb for numbness, color, temperature, and pulse after the cravats have been applied.

If your first check showed normal circulation and your check now shows poor circulation, untie the cravats. Reposition any rigid object that could interfere with circulation, such as one pressing against the armpit or groin. Add padding, if needed. Retie the cravats and recheck the circulation.

If the limb still has poor circulation, evacuate the casualty as soon as possible.

9-6. APPLY A SLING AND SWATHE TO A FRACTURED ARM

If the elbow is not fractured, form a sling for the fractured arm. A jacket flap sling can be used if no materials are available for a triangular sling.

> If the elbow is fractured, splint the arm in the position found. Do not bend the elbow to fit the arm into a sling.

a. Apply a Triangular Bandage Sling

Form a triangular cloth from a muslin bandage or other material (same as making a triangular bandage for a cravat or tourniquet band).

Insert the material under the injured arm so the arm is in the center, the apex of the sling is beyond the elbow, and the top corner of the material is over the shoulder of the injured side.

Position the forearm with the hand slightly raised (about 10^{o} angle).

Bring the lower portion of the material over the injured arm and over the shoulder of the uninjured side.

Tie the two corners in a nonslip knot on the side of the neck on the uninjured side.

Twist the apex of the sling and tuck it in at the elbow.

b. Apply a Jacket Flap Sling

Position the forearm on the casualty's chest with the hand positioned slightly higher than the elbow.

Undo the lower part of the casualty's BDU or field jacket (coat).

Bring the flap up over the forearm to the pocket area.

Position the elbow so it will not slip out of the sling.

Secure the flap by pushing a stick or other rigid object through the flap and the upper portion of the jacket.

c. Apply Swathes

Use a large strip of cloth, muslin bandage, field dressing, blanket strip, pistol belt, trouser belt, bandoleer, or other wide material as the swathe.

Place one end of the swathe at the breast pocket nearest the uninjured arm.

Wrap the swathe across the sling, around the upper arm on the injured side, behind the casualty's back, under the uninjured arm, and back to the breast pocket.

Do not apply a swathe on top of the fracture site.

Tie the two ends in a nonslip knot over the breast pocket on the uninjured side.

Two swathes, one above the fracture and one below the fracture are normally applied when the chest is used as a rigid object for splinting.

9-7. CLOSING

Even if the arm or leg is not broken, the pain caused by a severe wound can be lessened if the arm or leg is splinted after it has been dressed and bandaged. A fractured limb may need to be splinted before the casualty is repositioned to treat or prevent shock.

Ask for questions or comments.

STUDENT PRACTICE AND EXAMINATION

Have students pair off and practice applying splints to arms and legs. Also have the students practice applying slings and swathes.

This lesson is tested using the performance checklist in the student examination booklet. The basic checklist is shown on the following pages for your convenience. The examination may be administered at the end of the practice session.

Return to Table of Contents

PERFORM FIRST AID FOR A SUSPECTED FRACTURE

VERSION 1: Fractured leg (casualty conscious).

VERSION 2: Fractured forearm (casualty conscious).

NOTE TO EVALUATOR: Have an assistant or another student be the simulated casualty. Position the casualty on his back with the fractured limb exposed. Make a mark on the middle of the (forearm/lower leg) to indicate the location of the fracture.

The two versions have separate checklists to make evaluation easier,Version 1 (fractured leg) and Version 2 (fractured forearm).

MATERIALS NEEDED:

Two rigid objects (boards, straight sticks, etc.) suitable for splinting the limb.

Six muslin bandages.

Material for padding.

Situation

TELL THE STUDENT: "In order to pass this test, you must splint the fractured (forearm/leg) of this simulated casualty. The site of the fracture is here (indicate mark), but the skin is not broken. You have already exposed the limb and determined that the casualty has circulation below the wound."

[If Version 2 is being used, state, "Once the forearm is splinted, apply a sling and swathe. The casualty is conscious and can sit up when you are ready to apply the sling and swathe."]

"These are your materials (indicate materials). Begin."

Performance Checklist: IS0824, Lesson 9

VERSION 1: SPLINT A FRACTURED LEG

	GO	NO GO
Splints the fracture in the position found (does not attempt to straighten the leg).	_____	_____
Places cravats under limb with two cravats above the fracture and two cravats below the fracture and no cravat on the fracture site.	_____	_____
Places rigid objects on each side of the fractured leg without end of splint pressing against groin.	_____	_____
Places padding between limb and rigid objects.	_____	_____
Secures rigid objects in place with cravats.	_____	_____
Ties cravats with nonslip knots over rigid object.	_____	_____
Checks the casualty's circulation below the injury.	_____	_____
[If circulation is actually impaired, loosens cravats, repositions rigid objects (if needed), adds padding (if needed), and reties cravats tore store circulation.]	(_____	_____)
Cravats actually hold the rigid objects in place.	_____	_____
(May secure fractured leg to uninjured leg. Not a go/no-go step.)		

OVERALL EVALUATION	GO	NO GO
(A no-go on any step gives an overall evaluation of no-go.)	_____	_____

Performance Checklist: IS0824, Lesson 9

VERSION 2: SPLINT A FRACTURED FOREARM

	GO	NO GO
Removes any jewelry on hand of injured arm and puts it in casualty's pocket.	(____	____)
Splints the fracture in the position found (does not attempt to. straighten forearm)	_____	_____
Places cravats under forearm with at least one cravat above the fracture and at least one below the fracture and no cravat on the fracture site.	_____	_____
Places rigid objects on each side of the fractured forearm.	_____	_____
Places padding between limb and rigid objects.	_____	_____
Secures rigid objects in place with cravats.	_____	_____
Ties cravats with nonslip knots over rigid object.	_____	_____
Checks the casualty's circulation below the injury.	_____	_____
[If circulation is actually impaired, loosens cravats, repositions rigid objects (if needed), adds padding (if needed), and reties cravats to restore circulation.]	(____	____)
Cravats actually hold the rigid objects in place.	_____	_____
Makes triangular sling from bandage.	_____	_____
Positions the injured arm in sling with apex beyond elbow and top end over shoulder of injured side.	_____	_____
Brings other end of the sling over injured arm and ties ends at the neck on the uninjured side.	_____	_____
Sling keeps hand slightly higher than elbow.	_____	_____
Tucks the apex of the sling at the elbow.	_____	_____
Wraps swathe around upper arm and chest so only the injured arm is immobilized.	_____	_____
Ties the ends of the swathe in nonslip knot on the casualty's uninjured side.	_____	_____
OVERALL EVALUATION (A no-go on any step gives an overall evaluation of no-go.)	GO _____	NO GO _____

Return to Table of Contents

IS0824, COMBAT LIFESAVER: BUDDY-AID TASKS

Lesson 10: IMMOBILIZE A SUSPECTED SPINAL INJURY

Equipment and Supplies Needed:

Manikin, if used.

Blanket.

Roll of cloth.

Boots filled with small rocks.

Socks.

Personnel Needed:

Instructor (PA, 91W 20/30, or other person experienced in treating spinal injuries).

Assistant instructor(s) (91W etc.), as needed.

References:

STP 21-1-SMCT, Soldier's Manual of Common Tasks: Skill Level 1.
FM 21-11, First Aid for Soldiers.

10-1. INTRODUCTION

The spinal column of the neck and back surrounds and protects the nerves of the spinal cord. If the spinal cord is cut, the muscles and sensations controlled by the portion of the spinal cord below the cut will not function. Always check a casualty who may have fallen or been hit in the back for spinal injury. If the casualty has suffered a severe head injury, assume the casualty also has spinal damage.

OBJECTIVE

TASK

Identify proper procedures for immobilizing a suspected spinal injury.

CONDITION

Given multiple-choice items pertaining to spinal injuries.

STANDARD

Score 70 or more points on the 100-point written examination.

EXPLANATION

NOTE TO INSTRUCTOR: Use an assistant instructor or an appropriate manikin as a simulated casualty. Demonstrate the procedures discussed in this lesson on the simulated casualty. Describe the procedures during your demonstration.

10-2. IDENTIFY SIGNS AND SYMPTOMS OF A FRACTURED SPINE

Pain or tenderness of the neck or back.

Cut or bruise on the neck or back.

Inability to move parts of the body (paralysis), especially the legs.

Lack of feeling in a body part.

Touch the casualty's arms and legs and ask if he feels your hand.

Loss of bladder and/or bowel control.

Weak respiration.

Head or back in an unusual position.

10-3. MOVE A CASUALTY WITH A SUSPECTED SPINAL INJURY, IF NECESSARY

Do not move a casualty with a suspected spinal injury unless it is necessary to save his life, such as moving the casualty from a burning building or away from enemy fire or positioning a nonbreathing casualty to perform mouth-to-mouth resuscitation.

Use a four-man arms carry to move the casualty to a place of safety.

One soldier (usually the most experienced person available.) kneels at the casualty's head and places his hands on both sides of the casualty's head. This bearer keeps movement of the casualty's head and neck to a minimum when the casualty is moved.

The second soldier kneels at the casualty's chest and slips his arms under the casualty's shoulders and waist.

The third soldier kneels next to the second soldier and slips his arms under the soldier's hips and thighs.

The fourth soldier kneels next to the third soldier and slips his arms under the soldier's legs (or knees) and ankles.

On the command, "Lift," from the leader, all soldiers rise to their knees in unison, keeping the casualty's head and spine in straight alignment.

If a spine board is available or one can be improvised from a door or board, the casualty should be lowered onto the spine board and secured to the spine board. The casualty should then be lifted and moved to a safe location.

On the command, "Turn," from the leader, the soldiers gently turn the casualty toward their chests as the leader gently turns the casualty's head to maintain spinal alignment.

On the command, "Rise," from the leader, the soldiers stand in unison, maintaining alignment of the head and spine. The casualty is then carried out of danger.

When a safe location is reached, the soldiers gently lower the casualty onto a flat surface by reversing the lifting procedures and fully immobilize the casualty as described in the following learning event.

10-4. IMMOBILIZE THE CASUALTY'S SPINE

Do not attempt to straighten the casualty's neck or back if it is in an abnormal position.

Tell the casualty to keep still and avoid unnecessary movement.

Send someone to get medical help.

If the casualty is lying on his stomach, keep him from moving until medical help arrives.

If the casualty is lying on his back, use padding to help immobilize his back, neck, and head as described below.

Roll or fold a blanket or similar padding to conform to the normal shape of the arch of the back. Carefully slide the padding under the arch of his back.

Slide a roll of cloth under the casualty's neck to help support and immobilize his neck.

Place padded rocks, small padded logs, or filled boots on each side of the casualty's head to keep it from moving. To use boots:

Remove the casualty's boots. **Do not** remove the casualty's boots if in a chemical environment.

Fill each boot almost to the top with sand or small rocks.

Place material (strip of clothing, sock, etc.) on top of the sand or rocks to keep the sand or rocks from falling out.

Tie the top of each boot to keep the material from coming out.

Place the boots around the casualty's head so that the head will not turn.

10-5. CLOSING

A casualty with a suspected neck or spinal fracture should be moved by medical personnel whenever possible. If you must move the casualty to save his life, keep the movement of his back and neck to a minimum.

This lesson is tested on the written examination.

Ask for questions or comments.

Return to Table of Contents

IS0824, COMBAT LIFESAVER: BUDDY-AID TASKS

Lesson 11: PERFORM FIRST AID FOR BURNS

Equipment and Supplies Needed:

Nonsynthetic blanket.

Wooden poles.

Rope.

Simulated electrical wire.

Canteen (with water and basin, if desired).

Personnel Needed:

Instructor (PA, 91W 20/30, or other person experienced in treating burns).

Assistant instructor(s) (91W etc.), as needed.

References:

STP 21-1-SMCT, Soldier's Manual of Common Tasks: Skill Level 1.
FM 21-11, First Aid for Soldiers.

11-1. INTRODUCTION

If a casualty is being burned, you must first eliminate the source of the burn in order to protect both the casualty and yourself. Once the immediate danger has been removed or controlled, check the casualty for breathing, control any major bleeding, and take measures to control or prevent shock.

OBJECTIVE

TASK

Identify the proper procedures for treating a casualty with burns.

CONDITION

Given multiple-choice items pertaining to burns.

STANDARD

Score 70 or more points on the 100-point written examination.

EXPLANATION

NOTE TO INSTRUCTOR: Use an assistant instructor as a simulated casualty to demonstrate putting out flames, removing a casualty from an electrical wire, and flushing chemicals from an eye. Describe the procedures during your demonstration.

11-2. CLASSIFY BURN AS TO TYPE

Burns can be classified by cause and by severity. Burns can result from thermal, electrical, chemical, or radiant sources. They are usually rated as being first, second, or third degree in severity.

a. Thermal Burns

Thermal burns are caused by heat. They can be caused by a flame, a hot object, steam, or the fireball from a nuclear explosion.

b. Electrical Burns

Electrical burns are caused by an electrical current passing through the body, such as contact with a "live" electrical wire. Electrical burns involve both an entry burn where the current entered the body and an exit burn where the current left the body.

c. Chemical Burns

Chemical burns are caused by liquid or dry chemicals such as ammonia, caustic soda, quicklime, or white phosphorus (WP).

d. Radiant Energy Burns

Radiant energy burns can be caused by lasers, electric welding arcs, ultraviolet light, and microwaves. The primary danger is to the eyes.

e. Severity

First degree burns -- The skin is red and painful like a sunburn, but blisters are not present.

Second degree burns -- The skin is red and painful; blisters are present.

Third degree burns -- The skin layers are destroyed and extend down through underlying tissue to bone. The burn area may not be painful because the nerves have been destroyed, but the surrounding second and first degree burn areas may be painful.

11-3. PUT OUT FLAMES

If the casualty's clothing is on fire, cover the casualty with a large piece of nonsynthetic material (such as a wool or cotton blanket) and roll the casualty on the ground until the flames are smothered.

If nonsynthetic material cannot be obtained quickly, get the casualty to the ground and have him roll on the flame until it goes out.

Do not use synthetic materials such as nylon and rayon because they may melt and cause additional injury.

11-4. REMOVE A CASUALTY FROM ELECTRICAL CURRENT

If the casualty is lying on an electrical wire, assume the electrical wire is carrying electrical current and can be a danger to you as well as to the casualty.

Do not touch the electrical wire with your hands.

Do not touch the casualty since the current can pass from the wire and through the casualty to you.

a. Stop the Current

If the electrical current can be turned off quickly, such as flipping a switch, turn it off before removing the casualty from the wire.

Treat the wire as though it was still carrying current even if you think you turned off the current.

If it is quicker to separate the casualty from the wire, remove the casualty from the wire and administer aid first.

b. Separate Casualty and Wire

Two-rescuers: Slide a dry rope, dry clothing, or other material which will not readily conduct electricity under the casualty's body and lift the casualty from the wire. Have a second person use a wooden limb or other long, nonconducting object to push the wire away from the casualty.

One rescuer: Wrap dry rope or similar material around the casualty limb or limbs and drag the casualty away from the wire.

c. Check for Breathing

Check the casualty's respiration after you have separated him from the current. Administer mouth-to-mouth resuscitation if needed.

11-5. REMOVE CHEMICALS THAT CAUSE BURNS

a. Liquid Chemicals

Pour as much water as possible over the burned area.

If a sufficient amount of water is not available, use any nonflammable fluid to flush the area.

b. Dry Chemicals

Use a clean, dry cloth to brush off loose particles on the skin and flush the skin with as much water or nonflammable liquid as possible.

Do not flush dry chemicals unless water or other nonflammable fluid is available in large amounts. When combined with water, the chemical may change into an active, burning substance.

c. White Phosphorus

White phosphorus burns when exposed to air. Quickly smother the flame with water; then cover the area with wet material or mud to prevent air from reaching the white phosphorus. Keep the material covering the phosphorus wet and occluded from air. Get medical help or evacuate the casualty.

Do not attempt to remove the white phosphorus particles from the casualty's flesh.

Do not use grease or oil on the white phosphorus burn since they may cause the body to absorb the poisonous particles.

Do not use copper sulfate.

d. Radioactive Fallout

Brush off loose radioactive particles sticking to the casualty's clothing and skin and flush the skin with as much water as possible.

e. Chemicals in the Eye

Flush the eye with water as quickly as possible.

Position the casualty's head with the eye to be flushed lower than the other eye. This keeps chemicals from the eye being flushed from flowing into the other eye.

Hold the casualty's eyelid open.

Pour the water gently into the eye. Pour from the inner edge of the eye (end closest to the nose) to the outer edge.

Continue to flush the eye with water for at least 20 minutes.

11-6. TREAT RADIANT ENERGY (LASER) BURNS OF THE EYE

Laser burns cause an immediate decrease in the ability to see.

Protect the casualty from additional exposure to the radiant energy source and keep the casualty out of bright sunlight.

The casualty's eyes do not need to be bandaged, but he may feel more comfortable if a dark cloth or loose bandage is placed over his eyes if he does not need to walk or continue to perform his mission. If a bandage is applied, bandage only the involved eye.

Evacuate the casualty when the mission allows.

11-7. TREAT SKIN BURNS

At the time of the burn, apply copious amounts of water to the burn site.

a. Expose Burned Area(s)

Cut and gently lift away any clothing covering the burned area.

Do not pull clothing over the burned area.

Leave any piece of clothing that sticks to the burned area in place.

If you are in a chemical environment, do not expose the wound. Apply the dressing over the casualty's clothing.

b. Remove Jewelry

Remove any jewelry from the burned limb and put it in the casualty's pocket. The jewelry that is not removed now may have to be cut off later if the limb swells sufficiently.

c. Dress and Bandage Burned Area(s)

Apply a field dressing over the burn wound and secure the dressing using the attached tails.

If the burn is an electrical burn, find and dress both the entry and the exit burn wound. The sole of the foot is a common location for the exit burn.

If the burned area is large, use the cleanest material available to cover the burned area.

Do not try to clean the burned area before applying the dressing.

Do not apply any grease, ointments, or medications to the burned area.

Do not break any blisters that have formed.

d. Check for Shock

Fluid lost through burns is a cause of shock. Take appropriate measures to prevent shock or control shock.

If the casualty has second and third degree burns on 20 percent or more of his body, fluids should be administered intravenously.

If the casualty is not in shock and is not nauseated, give him small amounts of cool water to drink.

e. Get Medical Help

Seek medical help or evacuate the casualty, if practical.

Electrical burns can be far more serious than they first appear since most of the damage is done to the interior of the body.

11-8. CLOSING

A casualty with serious burns should receive intravenous fluids and be evacuated as soon as possible. If the burns to the skin are minor, a medical person should evaluate the casualty when possible since the burn is an open wound that can easily become infected if not treated.

This lesson is tested on the written examination.

Ask for questions or comments.

Return to Table of Contents

IS0824, COMBAT LIFESAVER: BUDDY-AID TASKS

Lesson 12: PERFORM FIRST AID FOR HEAT INJURIES

Equipment and Supplies Needed:

Poles (for improvised shade, if used).

Blankets or ponchos (for improvised shade, if used, and to lay casualty on, if used).

Personnel Needed:

Instructor (PA, 91W 20/30, or other person experienced in treating heat injuries.

Assistant instructor(s) (91W etc.), as needed.

References:

STP 21-1-SMCT, Soldier's Manual of Common Tasks: Skill Level 1.
FM 21-11, First Aid for Soldiers.

12-1. INTRODUCTION

Heat injuries can occur during both hot weather and temperate conditions when the normal temperature control mechanisms of the body are overwhelmed. This may occur when fluids are not adequately replaced, soldiers are not adequately rested, or body heat is not dissipated.

OBJECTIVE

TASK

Identify the three types of heat injuries and the treatment for each.

CONDITIONS

Given multiple-choice examination items pertaining to heat injuries.

STANDARD

Score 70 or more points on the 100-point written examination.

EXPLANATION

NOTE TO INSTRUCTOR: Use an assistant instructor as a simulated casualty, if desired. Describe the procedures during your demonstration, if performed.

12-2. IDENTIFY SIGNS AND SYMPTOMS OF HEAT CRAMPS

Grasping or massaging a limb (arm or leg) or bending over in an effort to relieve the pain of an abdominal cramp.

Skin wet with perspiration.

Unusual thirst.

12-3. TREAT HEAT CRAMPS

Move the casualty to a cool, shaded area to rest. Use poles, ponchos, blankets, or other available materials to improvise a shade, if needed.

Loosen the casualty's clothing around his neck and waist and loosen his boots.

Do not loosen the casualty's clothing if you are in a chemical environment.

Have the casualty slowly drink one quart (one canteen) of cool water.

Seek medical help or evacuate the casualty if the cramps continue.

12-4. IDENTIFY SIGNS AND SYMPTOMS OF HEAT EXHAUSTION

a. Most Common Signs and Symptoms of Heat Exhaustion

Profuse sweating with pale, cool skin.

Weakness or faintness.

Dizziness.

Headache.

Loss of appetite.

b. Other Signs and Symptoms of Heat Exhaustion

Heat cramps.

Nausea (with or without vomiting).

Chills ("gooseflesh").

Rapid breathing.

Urge to defecate.

Tingling in hands or feet.

Mental confusion.

12-5. TREAT HEAT EXHAUSTION

Seek medical help as soon as possible.

Move the casualty to a cool shaded area to rest. Improvise a shade, if necessary.

Position the casualty to lie on his back with his legs elevated (normal shock position).

Remove the casualty's clothing around his neck and waist and loosen his boots.

Pour water over the casualty and fan him to cool his body faster.

> Do not loosen or remove clothing or pour water over the casualty if you are in a chemical environment.

Have the casualty slowly drink one quart (one canteen) of cool water.

If the casualty cannot drink the water because of nausea or if he vomits, the combat lifesaver will insert an intravenous line and evacuate.

If the casualty recovers, have him perform only light duties for the remainder of the day if the mission permits; he should be evaluated by the combat medic if at all possible.

12-6. IDENTIFY SIGNS AND SYMPTOMS OF HEAT STROKE

Altered mental status (key sign).

May or may not be sweating.

> A soldier who is not perspiring or perspiring very little while other soldiers performing the same work are perspiring freely is in danger of heat stroke. Take emergency measures immediately.

Skin that is hot, and flushed (red).

Headache.

Weakness.

Dizziness.

Nausea or stomach pains.

Seizures.

Weak and rapid pulse and respiration.

Sudden loss of consciousness.

Monitor all soldiers for signs and symptoms of heat injury, changes in perspiration and complaints about the heat; these are signs that must be addressed. If necessary apply emergency aid measures immediately.

12-7. TREAT HEAT STROKE

Heat stroke is a **medical emergency**. In heat stroke, the body's internal (core) temperature increases to dangerous levels. If the casualty's body temperature is not lowered quickly, brain injury or death may result.

Send someone to get medical help while you work with the casualty.

Move the casualty to a cool shaded area or improvise a shade.

Loosen or remove the casualty's outer garments.

Position the casualty on his back with his feet elevated while pouring cool water over the casualty, fanning him vigorously, and massaging his arms and legs with cool water. Mist is more effective than pouring water.

> Do not loosen or remove clothing, pour water over the casualty, or massage his limbs if you are in a chemical environment.

Initiate an intravenous infusion.

Evacuate the casualty as soon as possible. If evacuation is delayed continue to give IV fluids and continue cooling efforts.

> Do not delay evacuation in order to start cooling measures. Perform cooling measures en route to the medical treatment facility.

Monitor the casualty's breathing. Administer mouth-to-mouth resuscitation if needed.

12-8. CLOSING

Any heat injury casualty should be examined by medical personnel even if he appears to recover fully. Adequate rest, proper clothing and adequate fluids can avoid heat injuries.

This lesson is tested on the written examination.

Ask for questions or comments.

Return to Table of Contents

IS0824, COMBAT LIFESAVER: BUDDY-AID TASKS

Lesson 13: IDENTIFY AND TREAT COLD INJURIES

Equipment and Supplies Needed:

None.

Personnel Needed:

Instructor (PA, 91W 20/30 or other person knowledgeable about environmental injuries).

Assistant Instructor(s) (91W etc.), as needed.

References:

FM 21-11, First Aid for Soldiers.
STP 21-1-SMCT, Soldier's Manual of Common Tasks: Skill Level 1.
STP 8-91-SM, Soldier's Manual: CMF 91 General Medical Tasks.

13-1. INTRODUCTION

Cold injuries have always been a threat to military forces operating in cold climates. In addition to frostbite (which occurs in freezing weather), there are several cold injuries such as trench foot, chilblain, and hypothermia which can occur even when the temperature is above freezing.

OBJECTIVE

TASK

Identify the proper procedures for treating a cold injury casualty.

CONDITION
Given written items pertaining to the identification and treatment of cold injuries.

STANDARD

Score 70 or more points on the 100-point written examination.

EXPLANATION

NOTE TO INSTRUCTOR: Discuss the signs and symptoms of each type of cold injury and the treatment procedures. If you wish, use an assistant instructor as the simulated casualty to demonstrate rewarming procedures.

13-2. IDENTIFY SIGNS AND SYMPTOMS OF CHILBLAIN

Skin exposed to cool temperatures (50°F or lower).

Acutely red, swollen, hot, tender, and/or itching skin.

Open sores or bleeding lesions from continued exposure.

13-3. TREAT A CASUALTY WITH CHILBLAIN

Apply local warming (put bare hands over the affected area on the face, put affected hands inside the uniform under the armpits, etc.).

Do not rub or massage the affected area.

Apply a field dressing to lesions (sores).

Have the casualty examined by medical personnel as soon as practical.

13-4. IDENTIFY SIGNS AND SYMPTOMS OF IMMERSION SYNDROME INJURIES

Hand or foot in water for an extended time.

Affected hand or foot may have blisters, swelling, redness, and bleeding.

First phase: Hand or foot is cold and without pain.

Second phase: Affected limb feels burning hot and has shooting pains.

Third phase**:** Pale skin, bluish coloring around the nailbeds and lips, weak pulse.

13-5. TREAT A CASUALTY WITH IMMERSION SYNDROME

Dry the affected part immediately.

Remove wet clothing and replace with dry, warm clothing.

Rewarm the affected area gradually in warm air.

Do not rub or massage the affected hand or foot.

Elevate the affected part to reduce swelling.

Protect the casualty from additional injury.

Evacuate casualty to a medical treatment facility as soon as practical.

13-6. IDENTIFY SIGNS AND SYMPTOMS OF FROSTBITE

Flesh has been exposed to freezing temperatures (below 32°F).

Usually occurs on the feet, toes, nose, ears, chin, cheeks, forehead, fingers, hands, and wrists.

a. Superficial Frostbite

A reddish (in light-skinned individuals) or grayish (in dark-skinned individuals) area on exposed skin.

A sudden blanching (whitening) of the affected area.

A tingling sensation followed by numbness.

Blisters (normally filled with clear or serous fluid) and sloughing (flaking in large sheets) of affected skin. (This sign may occur 24 to 36 hours after exposure.)

b. Deep Frostbite

Total lack of feeling in the affected (frozen) tissue.

Pale, yellowish, waxy-looking skin.

Solid flesh (feels wooden to the touch).

Red-violet discoloration, blisters, and sloughing of affected skin may occur (usually 1 to 5 days after the initial injury).

13-7. TREAT A CASUALTY WITH FROSTBITE

Move the casualty to a sheltered area.

Loosen constricting clothing.

Remove jewelry on the affected limb, if applicable. (A ring on a swollen finger could interfere with blood circulation.).

If available the area should be rapidly rewarmed using warm water (between 100 and 104 degrees F). This is not prolonged soaking used only until the area is rewarmed.

If warm water not available gradually warm the exposed area.

Use the same warming procedures as with chilblain.

If the feet are frostbitten, remove the casualty's boots and socks and put his feet against the exposed abdomen of another soldier. Cover both soldiers to keep them warm. If the casualty's frozen feet must be exposed to freezing temperature during evacuation, do not thaw his feet prior to evacuation.

Do not expose the frostbitten area to extreme heat that could result in burns.

Do not rub, massage, or soak the frostbitten area.

Give the casualty something warm to drink.

Do not give alcoholic beverages or tobacco products to the casualty. Alcohol and tobacco can promote heat loss.

Protect the frostbitten area from cold and additional injury.

Evacuate the casualty to a medical treatment facility as soon as possible. If the casualty's frozen feet must be exposed to freezing temperature during evacuation, do not thaw his feet prior to evacuation.

ASK: Suppose a soldier has a foot with deep frostbite and will have to walk to a nearby medical treatment facility. Should you warm his foot before sending him to the facility?

Response: No.

13-8. IDENTIFY SIGNS AND SYMPTOMS OF GENERALIZED HYPOTHERMIA

Generalized hypothermia occurs when the whole body (rather than just a body part) is cooled to an unusually low temperature. It is a medical emergency that can result in death if not treated promptly. Generalized hypothermia is often called simply "hypothermia."

a. Mild Hypothermia

Apathetic, lethargic behavior.

Pale, cold skin.

Acetone (sweet, fruity) breath odor.

Shivering, which soon stops.

Slurred speech

Poor muscle coordination

Faint pulse.

b. Severe Hypothermia

Skin ice cold.

Slow, shallow respirations.

Faint, irregular pulse or lack of detectable pulse.

Glassy eyes.

Mental confusion.

Unconsciousness.

Rigid muscles

Very low body temperature (below 85^{o}F).

13-9. TREAT A CASUALTY WITH GENERALIZED HYPOTHERMIA

a. Mild Hypothermia

Move the casualty out of the wind to a sheltered environment.

Replace wet clothing with dry clothing or sleeping bags.

Cover the casualty with blankets or other insulating material.

Apply heating pads (if available) wrapped in towels to the casualty's armpits, groin, and abdomen.

Give the casualty warm, nutritious fluids to drink.

Do not give alcoholic beverages or tobacco products to the casualty.

Wrap the casualty from head to toe and evacuate to a medical treatment facility in a recumbent (lying down) position.

b. Severe Hypothermia

Cut away wet clothing and replace with dry clothing.

Ensure that the casualty's airway remains open and the casualty continues to breathe.

Perform mouth-to-mouth resuscitation if the casualty's breathing rate drops below five respirations per minute.

Use J-tube if needed and the casualty is unconscious.

Apply an additional heat source since the casualty's body cannot generate sufficient body heat to warm itself.

Have another soldier remove his outer clothing and get into the same sleeping bag as the casualty, then covering both soldiers. The second soldier's body heat will warm the casualty's body.

Evacuate the casualty to a medical treatment facility as soon as possible.

Evacuate the casualty even if you cannot detect respiration or a heartbeat.

Be gentle when moving the casualty.

13-10. IDENTIFY SIGNS AND SYMPTOMS OF SNOW BLINDNESS

Snow blindness is a temporary loss of sight caused by ultraviolet rays from the sun reflecting off snow or ice. The condition is similar to a welding flash burn and is caused by damage to the cells covering the cornea (clear portion of the eye). Snow blindness can usually be prevented by wearing regular or improvised sunglasses that cut down on the amount of ultraviolet rays that reach the eyes.

ASK: Suppose a soldier working in an ice-covered terrain says that he will not wear his sunglasses because it is cloudy? Should the soldier still wear his sunglasses?

Response: Yes. Snow blindness often occurs in cloudy or hazy weather. Clouds and haze do not stop the invisible ultraviolet radiation.

Scratchy feeling in the eyes as though dirt or sand were present in the eyes, sometimes more severe pain.

Decreased vision.

Tears.

Difficulty in opening eyelids.

Headache.

Pain.

13-11. TREAT A CASUALTY WITH SNOW BLINDNESS

Cover the casualty's eyes with a dark cloth.

Reassure the casualty that the condition is temporary and he will regain his sight.

Evacuate him to a medical treatment facility as soon as practical.

ASK: Of the cold injuries discussed, which is a medical emergency requiring immediate treatment?

Response: Hypothermia.

13-12. CLOSING

Cold can be a deadly enemy. Soldiers can protect themselves from this enemy by taking preventive measures. The buddy system should be used since it may be easier to detect the early signs and symptoms of cold injury on another person than on you. If a soldier does become a cold injury casualty, you must be ready to recognize the problem and provide proper treatment.

This lesson is tested in the written multiple-choice examination.

Ask for questions or comments.

Return to Table of Contents

IS0824, COMBAT LIFESAVER: BUDDY-AID TASKS

LESSON 14: PERFORM FIRST AID FOR A NERVE AGENT CASUALTY

Equipment and Supplies Needed:

Manikin, if used.

Mark I nerve agent antidote autoinjector training set.

CANA (diazepam) autoinjector training set.

Mask with hood.

Protective gloves.

Personnel Needed:

Instructor (PA, 91W 20/30, or other person trained in treating chemical agent casualties).

Assistant Instructor(s) (91W etc.), as needed.

References:

STP 21-1-SMCT, Soldier's Manual of Common Tasks: Skill Level 1.
FM 3-4, NBC Protection.
FM 21-11, First Aid for Soldiers.
FM 8-285, Treatment of Chemical Agent Casualties and Conventional Military Chemical Injuries.

14-1. INTRODUCTION

A soldier showing signs of mild nerve agent poisoning will normally be able to take care of himself. A soldier showing signs of moderate to severe nerve agent poisoning, however, will not be able to adequately help himself and must have assistance.

OBJECTIVE

TASK

Identify the buddy-aid procedures for treating a nerve agent casualty.

CONDITIONS

Given multiple-choice examination items pertaining to nerve agent poisoning, buddy-aid treatment, and decontamination.

STANDARD

Score 70 or more points on the 100-point written examination.

EXPLANATION

NOTE TO INSTRUCTOR: Demonstrate the procedures for masking, administering injections, and decontaminating exposed skin. Use an assistant instructor or an appropriate manikin as the simulated casualty. Explain the procedures as you demonstrate. If possible, wear protective gloves as you demonstrate.

14-2. TAKE PROTECTIVE MEASURES

Anytime you believe you have been or will be exposed to a chemical agent, your first action must be to protect yourself. You cannot continue with your mission or administer aid to casualties if the chemical warfare agent overcomes you.

Put on your protective mask immediately and give the alarm.

If you have signs and symptoms of mild nerve agent poisoning (unexplained runny nose, sudden headache, dizziness, drooling, tightness in the chest, muscular twitching, stomach cramps, nausea, and/or reduced vision), administer one set of nerve agent autoinjectors to yourself and decontaminate your exposed skin.

Put on the rest of your protective clothing.

14-3. IDENTIFY SIGNS OF SEVERE NERVE AGENT POISONING

A casualty may progress from mild to moderate to severe nerve agent poisoning signs. Signs of severe nerve agent poisoning include:

Strange and confused behavior.

Coughing, wheezing, and gurgling sounds while breathing.

Difficulty in breathing.

Severely pinpointed pupils.

Red eyes with tears present.

Vomiting.

Severe muscular twitching and general weakness.

Loss of bladder and bowel control.

Decreased pulse rate.

Convulsion.

Paralysis.

Unconsciousness.

Respiratory failure (or respiratory arrest) [casualty stops breathing].

14-4. MASK THE CASUALTY

Put the casualty's mask on him immediately if he is not masked. If he is already masked, check the seal.

Position the casualty on his back.

> Squat; do not kneel, in a chemical environment. Pressing your knee against the contaminated ground will reduce the protection time afforded by your protective clothing.

Open the casualty's mask carrier and remove his protective mask.

Hold the mask with the lenses facing you.
Put your thumbs on the outside of the cheek pouches of the mask and your fingers on the inside of the cheek pouches.

Spread the mask open and position it on the casualty's chin.

Put your thumbs through the two bottom straps of the head harness.

Cup the casualty's head with the fingers of both hands and lift his head slightly.

Slide the head harness over the casualty's head by moving your thumbs toward the back of the casualty's head and down behind his ears.

Make sure the two bottom straps of the head harness are below the casualty's ears, the temple straps are above his ears, and the head pad is centered in the middle of the back of his head.

> The head harness should not need to be adjusted. If the straps do need to be tightened, tighten them using short, firm, jerks.

Check the seal of the mask against the casualty's face.

> If the casualty can follow instructions, have him clear his mask by covering the outlet valve and voicemitter and exhaling forcefully, then covering the inlet valves and inhaling.
>
> If the casualty cannot follow instructions, cover the mask's inlet valves. If the mask collapses when the casualty inhales, it is properly sealed. If it does not collapse, reseat the mask. If the soldier is not breathing, you cannot determine whether the mask is properly sealed.

Make sure the buckles are lying flat and the straps form a straight line with the tabs.

Pull the protective hood over the casualty's head, neck, and shoulders.

NOTE TO INSTRUCTOR: The following Learning Events assume the casualty has signs of severe nerve agent poisoning.

14-5. ADMINISTER THREE NERVE AGENT ANTIDOTE KITS AND CANA

a. Select Injection Site

Roll the casualty onto his side (Swimmers Position) for the administering of the nerve agent antitdote.

The normal injection site is the outer part of the casualty's thigh at least the width of one hand below the hip joint and at least the width of one hand above the knee. If the casualty is very thin, select a site on the upper, outer quadrant of the casualty's buttocks. Lift his jacket if it is covering the site.

Thigh. With the casualty **lying on his side**, position yourself near the casualty's left thigh. (This makes it easier to reach into his mask carrier for additional kits.) The injection site is on the outer part of the casualty's thigh at least the width of one hand below the hip joint and at least the width of one hand above the knee.

Buttocks. Roll the casualty **onto his side** and position yourself at his hip. The injection site is the upper, outer quadrant of the casualty's buttocks. The upper, outer quadrant is used to avoid hitting the major nerve in the buttocks. If the casualty's jacket is covering the injection site, lift the bottom of the jacket.

b. Administer Atropine

Remove one Mark I nerve agent antidote kit from the inside pocket of the casualty's mask carrier.

> If the temperature is near or below freezing, the autoinjectors may be carried next to the casualty's body.

Hold the kit by the clip in your nondominant hand at eye level with the larger (2-PAM chloride) autoinjector on top.

Feel the injection site with your free hand to make sure the site is free from buttons or other obstructions that could damage the needle.

Grasp the body of the lower (smaller) autoinjector with the thumb and two fingers of your dominant hand (Like holding a pen or pencil).

> Do not touch the green (needle) end of the autoinjector since the pressure could cause the needle to function.

Pull the atropine autoinjector out of the clip with a smooth motion.

Holding the autoinjector with the thumb and two fingers (Like holding a pen or pencil) place the green end of the autoinjector against the injection site (thigh or buttocks) at a 90^{o} angle to the surface of the site.

Apply firm even pressure to the autoinjector until the needle functions (clicks), penetrates the clothing, and automatically injects the medication into the casualty's muscle.

> Do not use a jabbing motion to inject the antidote into the muscle.

Hold the autoinjector in place for at least 10 seconds.

Pull the autoinjector out of the casualty's body at the same 90^{o} angle.

Place the used atropine autoinjector between two fingers of the hand holding the kit with the needle pointing away from your hand.

c. Administer 2-PAM Chloride

Grasp the body of the remaining (2-PAM chloride) autoinjector with the thumb and two fingers of your free hand (Like holding a pen or pencil).

Pull the autoinjector out of the clip in a smooth motion.

Do not touch the black (needle) end of the autoinjector.

Continueing to hold the autoinjector with the thumb and first two fingers place the black end of the autoinjector against the injection site at a 90^{o} angle.

Apply firm, even pressure until the needle functions.

Do not use a jabbing motion.

Hold the autoinjector in place for at least 10 seconds.

Pull the autoinjector out of the casualty's body at the same 90^{o} angle.

Drop the empty plastic clip without dropping the autoinjectors.

Lay the used autoinjectors on the casualty's side.

d. Administer Second and Third Kits

Administer the second Mark I kit using the same procedures as for the first kit.

Administer the third kit of autoinjectors.

There is no waiting period between kits.

If the casualty already administered one set of injectors to himself (used autoinjectors attached to pocket flap), you will only administer the two additional Mark I kits.

NOTE TO INSTRUCTOR: The combat lifesaver should use the casualty's own antidote autoinjectors when providing aid. He should not use his own personal Mark I kits. If he does he may not have any antidote available later if needed for self-aid.

e. Administer CANA

The CANA is NOT for use as self-aid. If you know who you are, where you are, and what you are doing, you do not need CANA.

Administer the CANA immediately after the third MARK I to prevent convulsions.

NOTE TO INSTRUCTOR: The combat lifesaver should not use his own CANA on the casualty. If he does, he may not have any antidote for his own treatment, if needed.

Grasp the CANA autoinjector with your dominant hand with the needle end extending beyond your thumb and two fingers (Like holding a pen or pencil).

With your other hand, pull the safety cap off the autoinjector base.

The injector is now armed.

DO NOT touch the black (needle) end because you may accidentally inject yourself.

Position the black (needle) end of the autoinjector against the casualty's injection site (thigh or buttocks).

Apply firm; even pressure (not a jabbing motion) to the injector until it pushes the needle into the casualty's thigh (or buttocks). Make sure you do not hit the casualty's mask carrier or any objects in the individual's pockets.

Hold the injector firmly in place for at least 10 seconds.

Carefully remove the CANA autoinjector from the casualty's injection site.

Drop the safety cap. (The cap can be disposed of earlier.)

f. Secure Used Autoinjectors

Attach used autoinjectors, atropine, PAM chloride, and CANA to the casualty's clothing, usually the left pocket flap.

14-6. DECONTAMINATE EXPOSED SKIN

Obtain M291 Kit

Obtain the M291 decontamination kit from the casualty's mask carrier.

The M291 Skin Decontaminating Kit is provided to service members for skin decontamination. This kit may also be used to decontaminate selected individual equipment, such as load bearing equipment, protective gloves, mask, hood, and weapon.

NOTE TO INSTRUCTOR: The M291 kit is for external use only. Keep decontaminating powder out of the eyes; it may be slightly irritating to the eyes. Use water to wash toxic agent out of eyes. You may also use a 0.5 percent chlorine solution to wash toxic agent out of cuts or wounds.

Seek overhead cover or use a poncho for protection against further contamination.

a. Decontaminate Hands

Remove one skin decontaminating packet from the carrying pouch.

Tear open quickly at notch. Although any notch may be used to open the packet, opening at the TEAR LINE will place applicator pad in a position that is easier to use.

Remove applicator pad from packet and discard empty packet.

Unfold applicator pad and slip finger(s) into handle.

Thoroughly scrub exposed skin on the casualty's hands (back of hand, palm, and fingers) until completely covered with black powder from the applicator pad.

b. Decontaminate Face

NOTE TO INSTRUCTOR: Injury or death may result if the casualty breathes toxic agent while doing the following step. If the casualty needs to breathe before you finish, reseal the mask, clear and check it, tell casualty to take a breath, then resume the decontaminating procedure.

Thoroughly scrub exposed skin of the casualty's face until completely covered with black powder from the applicator pad.

Have casualty hold his breath, close his eyes. Grasp his mask beneath chin, and pull hood and mask away from chin enough to allow one hand between the mask and the face. Hold mask in this position until you discard the applicator pad.

Scrub up and down across face beginning at from of one ear to nose to other ear.

Scrub across face to corner of nose.

Scrub extra stroke at corner of nose.

Scrub across nose and tip of nose to other corner of nose.

Scrub extra stroke at corner of nose.

Scrub across face to other ear.

Next scrub up and down across face to mouth to other end of jawbone.

Scrub across cheek to corner of mouth.

Scrub extra stroke at corner of mouth.

Scrub across closed mouth to center of upper lip.

Scrub extra stroke above upper lip.

Scrub across closed mouth to other corner of mouth.

Scrub extra stroke at corner of mouth.

Scrub across cheek to end of jawbone.

Next, scrub up and down across face to chin and to other end of jawbone.

Scrub across the under jaw to chin, cupping.

Scrub extra stroke at center of chin.

Scrub across the under jaw to the end of the jawbone.

Turn your hand out, and quickly wipe the inside of the mask that touches the face.

Discard applicator pad.

Immediately seal mask, clear, and check it.

c. Decontaminate Neck

If the casualty was already masked when becoming contaminated, without breaking the seal between the face and mask, thoroughly scrub skin of neck and ears until completely covered with black powder.

Remove second skin decontaminating packet from carrying pouch.

Tear open quickly at notch.

Remove applicator pad from packet and discard empty packet.

Redo hands until completely covered with black powder.

Discard applicator pad.

Put the protective gloves on the casualty.

Fasten casualty's hood.

Remove powder with soap and water when operational conditions permit. It does not matter how long the powder stays on your skin.

Bury the used pads and packets if circumstances permit.

NOTE TO INSTRUCTOR: The M291 kit is replacing the M258A1 kit. For U.S. Army personnel, replaced by the M291, the M258A1 kit will be used for decontamination of individual equipment only.

SPECIAL NOTE: The combat lifesaver can administer additional atropine and CANA carried in his aid bag. Additional information is contained in subcourse MD0825 Lesson 22.

14-7. CLOSING

Masking the casualty, administering three Mark 1 kits and CANA, and decontaminating exposed skin are initial treatment measures for a nerve agent casualty. The medical phase of the combat lifesaver course presents additional treatment procedures for severe nerve agent casualties and treatment for victims of other types of chemical agents.

This lesson is tested on the written examination.

Ask for questions or comments.

Return to Table of Contents

IS0824, COMBAT LIFESAVER: BUDDY-AID TASKS

LESSON 15: TRANSPORT A CASUALTY

Equipment and Supplies Needed:

Pistol belts.

Cravats.

Two (or more) poles.

Two jackets or heavy shirts.

Poncho.

Two potato sacks.

Blanket.

Standard litter, if used.

Personnel Needed:

Instructor (PA, 91W 20/30, or other person trained in evacuating casualties).

Assistant Instructor(s) (91W etc.), as needed.

References:

STP 21-1-SMCT, Soldier's Manual of Common Tasks: Skill Level 1.
FM 8-10-6, Medical Evacuation in a Theater of Operations.
FM 21-11, First Aid for Soldiers.

SECTION I. GENERAL

15-1. INTRODUCTION

A soldier who is seriously injured will need to be evacuated to a medical treatment facility. Sometimes a vehicle can be used to transport the soldier. At other times, he must be carried to the aid station or to a collection point. If a standard litter is available and soldiers are available to use as litter bearers, evacuate the casualty on the litter. If a standard litter is not available but materials are available to make an improvised litter and soldiers are available to use as litter bearers, construct an improvised litter and evacuate the casualty on the litter. If litters or time is not available, evacuate the casualty using a two-man manual carry. If only one person can be spared to evacuate the casualty, use a one-man manual carry to transport the casualty.

OBJECTIVE

TASK

Transport a casualty using an appropriate one-man, two-man or litter carries.

CONDITIONS

Given a simulated casualty and an assistant.

STANDARD

Score a GO on the performance checklist.

EXPLANATION

NOTE TO INSTRUCTOR: Use an assistant instructor as the simulated casualty. If two assistants are available, let the other assistant be the combat lifesaver. Demonstrate the carries discussed in this lesson. Describe the procedures during the demonstration.

15-2. CHOOSE THE APPROPRIATE METHOD TO MOVE A CASUALTY ON THE BATTLEFIELD

When choosing a carry, consider the casualty's injuries, the military situation, the distance to be covered, the weight of the casualty, your strength and endurance, and obstacles to be encountered.

The following methods of transporting a casualty are given in the order of preference.

Preferred method: Military vehicle, preferably an air or ground ambulance (discussed in more detail in IS0825).

Second method: Litter (The preferred manual carry.), preferably a standard litter if litter and two or more litter bearers are available; otherwise, an improvised litter if materials, time, and bearer(s) are available.

Third method: Manual carry, preferably a two-man carry if an assistant is available; otherwise, a one-man carry.

> Do not transport a casualty with a suspected fracture of the neck or back unless it is necessary to save his life. Use a back board if available. Wait until medical personnel arrive, if possible.

SECTION II ONE-MAN CARRIES.

15-3. ONE-MAN CARRIES

a. Fireman's Carry

Used to quickly move an unconscious or conscious casualty.

Can be used to move the casualty a moderate or long distance.

Leaves one of the bearer's arms free to carry a rifle, move around obstacles, etc.

b. Support Carry

Used only with a conscious casualty who can walk or at least hop on one leg.

Can be used to move a casualty a long distance or until the casualty tires.

c. Arms Carry

Used to move a conscious or unconscious casualty.

Used to move a casualty a short distance.

d. Saddleback Carry

Used only for a conscious casualty who can put his arm around your neck.

Can be used to move a casualty a moderate or long distance.

e. Pack-Strap Carry

Used for a conscious or unconscious casualty.

Can be used to move a casualty a moderate distance.

Not used if the casualty has a broken arm.

f. Pistol-Belt Carry

Used to carry a conscious or unconscious casualty.

Can be used to move a casualty a long distance.

Leaves both hands free to use your rifle, climb banks, or move over obstacles.

g. Pistol-Belt Drag

Used to move a conscious or unconscious casualty.

Used to move a casualty for a short distance.

Keeps rescuer and casualty closer to the ground than any other carry or drag.

h. Neck Drag

Used to move a conscious or unconscious casualty.

Used to move a casualty for a short distance.

Keeps rescuer close to the ground, but not as close as the pistol-belt drag.

Used when moving behind a low wall, under a vehicle, or through a culvert.

Not used if the casualty has a broken arm.

j. Cradle Drop Drag

Used to move a conscious or unconscious casualty.

Used to move a casualty up or down steps or low drops or to quickly move a casualty from a life-threatening situation.

15-4. TURNING OR POSITIONING A CASUALTY

Some carries require the casualty to be in a prone position; others require him to be in a supine position.

Kneel at the casualty's uninjured side.

If you are in a chemical environment, squat--do not kneel.

Place the casualty's arms above his head and cross his far ankle over the near one.

Grasp the casualty's clothing at his far shoulder and hip and gently pull so the casualty rolls toward you. Continue until the casualty is turned (on his abdomen or back).

Place the casualty's arms at his side and straighten his legs.

15-5. MOVING A CASUALTY TO A STANDING POSITION

Some one-man carries require the casualty be raised to a standing position. If the casualty is conscious, you may be able to assist him to stand up. If the casualty is unconscious, however, you need to raise him to a standing position without his help.

a. Regular Method

Position the casualty in a prone position.

Straddle the casualty, slip your hands under his chest, and lock your hands together.

Lift the casualty and begin walking backward until he is on his knees.

Continue walking backward until his legs are straight and his knees are locked.

Walk forward and bring the casualty to a standing position. Keep the casualty tilted slightly backward so his knees will remain locked. If his knees do not remain locked, walk backward until they lock and then move forward until the casualty is in the standing position.

Grasp one of the casualty's wrists and raise his arm. Use your other arm to hold the casualty erect.

Move under the casualty's arm to his front, lower his arm, and put both of your arms around the casualty's waist to support the casualty. Interlock the fingers of your hands.

Place your foot between the casualty's feet and spread them so his feet are about six to eight inches apart.

b. Alternate Method

This method is used if it will be safer for the casualty due to his injuries.

Position the casualty in a prone position.

Kneel on one knee at the casualty's head, facing the casualty's feet.

If you are in a chemical environment, squat--do not kneel.

Put your hands under his armpits, down his sides, and across his back.

Rise, lifting the casualty to his knees. Keep the casualty's head from snapping back.

Lower your arms, secure a hold on the casualty, and raise him to a standing position with his knees locked.

Put your arms around the casualty's waist, interlock your fingers, and tilt his body slightly backward to keep his knees from buckling.

Place your foot between his feet and spread them so his feet are six to eight inches apart.

15-6. PERFORM THE FIREMAN'S CARRY

Raise the casualty to a standing position.

Grasp the casualty's wrist and lift his arm over his head while continuing to support the casualty with your other arm.

If the casualty has an injured arm, grasp the wrist of the uninjured arm.

Bend at the waist and kneel, pulling the casualty over your shoulder. At the same time, slip your arm from his waist, pass the arm between the casualty's legs, and grasp behind the casualty's knee.

Move the hand grasping the casualty's wrist to the hand at the casualty's knee.

Grasp the casualty's wrist with the hand behind the casualty's knee, thus freeing the hand that previously held the wrist.

Place your free hand on your knee and push on your knee to slowly rise to a standing position. This will help to prevent back strain.

Adjust the casualty's body so his weight is distributed comfortably.

Move forward, carrying the casualty.

15-7. PERFORM THE SUPPORT CARRY

Position the casualty in a sitting position.

Bend down at the casualty's side so you are facing in the same direction as the casualty.

If the casualty has an injured leg, position yourself with the injured leg next to you.

Bring the casualty's near arm over your shoulder and grasp his wrist with your hand that is away from the casualty.

Put your inside arm around the casualty's waist.

Stand up, helping the casualty to rise to a standing position also.

Assist the casualty to walk or hop on one leg.

Adjust your walking motion as needed to help the casualty maintain his balance.

15-8. PERFORM THE ARMS CARRY

Raise the casualty to a standing position.

Slide one of your arms under the casualty's arm, behind his back, and under his other arm.

Move to the casualty's side, bend down, and place your other arm behind the casualty's knees.

Lift the casualty from the ground and stand erect.

Carry the casualty high on your chest to lessen fatigue.

15-9. PERFORM THE SADDLEBACK CARRY

Raise casualty to a standing position or have the casualty stand up.

Grasp the casualty's wrist and lift his arm over his head while continuing to support the casualty with your other arm.

Turn so your back is to the casualty and bring his arm over your shoulder. Support the casualty's waist with your other arm, if needed.

Grasp the casualty's other wrist and lift his arm over your shoulder or have the casualty put his other arm around your neck.

Have him grasp one of his wrists with his other hand.

Stoop and move your arms around the outside of the casualty's thighs.

Bring your hands inside the casualty's thighs to your sides, lifting his thighs.

Stand up and clasp your hands together in front of you.

Adjust the casualty to make the weight distribution more comfortable.

Walk forward.

15-10. PERFORM THE PACK-STRAP CARRY

Raise the casualty to a standing position.

Grasp one of the casualty's wrists and lift his arm above his head while continuing to support the casualty's waist with your other arm.

Turn so your back is to the casualty. Bring the casualty's raised arm over your shoulder as you turn.

Bend your knees somewhat so your shoulder fits under his arm.

Release his waist, grasp his other wrist, and bring that arm over your other shoulder.

> Hold both wrists so his hands are in a palms down (palms toward your body) position. Twisting his hands could result in injury to the casualty's joints when he is lifted and carried.

Bend forward and lift the casualty as high on your back as possible.

Walk forward, keeping bent so the casualty's weight is balanced on your back and his feet are not dragging.

15-11. PERFORM THE PISTOL-BELT CARRY

Form a sling by joining two fully extended pistol belts together to form one large loop. If pistol belts are not available, use material which will not break and which will not cut or bind the casualty, such as a rifle strap or cravat bandages.

Position the casualty on his back.

Slip the sling under the casualty so the top part of the loop is under his lower back, the bottom part of the loop is under his thighs, the belt buckles are centered behind the casualty, and a loop end extends from each side.

Move the casualty's legs apart and lie between them on your back.

Thrust your arms through the loop ends and fit the loop ends over your shoulders.

Grasp the casualty's wrist and his trouser leg on his injured side.

Roll toward the casualty's uninjured side and onto your abdomen. (Both you and the casualty are now in a prone position.)

Release the casualty's wrist and leg and push yourself up until you are on your knees.

Rise to a kneeling position and place your hand on your knee for support.

Rise to your feet. Lean forward to balance the casualty's weight.

Adjust the casualty's body so the weight is distributed comfortably.

Walk forward.

Your hands are free to carry a rifle, climb obstacles, etc.

If the casualty is conscious, have him put his arms around your neck.

If the casualty is unconscious and you do not have to carry anything in your hands, grasp his wrists (palms down) to help balance the casualty while you are walking.

15-12. PERFORM THE PISTOL-BELT DRAG

Extend two (or three) pistol belts to their full length and join them together to make one large loop. Other materials, such as a rifle sling or cravats, can be used if pistol belts are not available.

Position the casualty on his back.

Slip one end of the loop across the casualty's chest, under his armpits, and under his shoulders.

Twist the remainder of the loop above his head to form a figure 8. Adjust the belts so the buckles cross in the center of the figure 8.

Lie on your side facing the casualty with your head in the same direction as the casualty's head. Support yourself on your elbow.

Slip the arm on which you are resting through the top loop of the figure 8 and bring the loop over your shoulder.

Turn onto your abdomen. The sling is now across and under your chest and the loop is on the shoulder away from the casualty.

Crawl, dragging the casualty with you.

15-13. PERFORM THE NECK DRAG

Position the casualty on his back.

Tie the casualty's hands together with material that will not cut his wrists, such as a field dressing or a cravat. Do not tie the materials tight enough to interfere with the blood circulation.

If the casualty is conscious, tell him to interlock his fingers.

Face the casualty's head and straddle his hips on your knees.

Loop the casualty's arms around your neck.

Crawl forward on your hands and knees, dragging the casualty beneath.

Keep the casualty's head from dragging on the ground.

15-14. PERFORM THE CRADLE DROP DRAG

Position the casualty on his back.

Kneel at the casualty's head.

Slide your hands (palms up) under his shoulders and grasp the clothing under his armpits.

Partially rise, pulling the casualty to a semi-sitting position.

Support his head on one of your arms.

If possible, bring your elbows together and use both forearms to support the head.

Rise to a stooped position.

Walk backward, dragging the soldier backward.

If you go down steps, let his hips and legs drop from step to step.

15-15. CLOSING

One-man carries are used to quickly remove a casualty from a source of danger, such as a burning building or enemy fire. They are also used to evacuate a casualty when other methods are not available. Being able to perform the carries rapidly and properly will help to get both the casualty and you to a place of safety quickly.

Ask for questions or comments.

STUDENT PRACTICE AND EXAMINATION

Have students pair off and practice performing one-man carries with the students taking turns being the casualty. Observe the students and correct any errors noted.

This lesson is tested using the performance checklist in the student examination booklet. The basic checklist is given on the following pages. It is recommended that you also have students practice performing other one-man carries described in this lesson. The examination may be administered at the end of the practice session.

CHECKLIST SECTION II
TRANSPORT A CASUALTY

VERSION 1: Fireman's carry (unconscious casualty in prone position).

VERSION 2: Pistol-belt carry (unconscious casualty in supine position).

NOTE TO EVALUATOR: Have an assistant or another student be the simulated casualty. Have the casualty lie on his stomach (Version 1) or on his back (Version 2), as appropriate.

The two versions have separate checklists to make evaluation easier.

MATERIALS NEEDED:

Two pistol belts or similar material (Version 2).

Situation

(Version 1)

TELL THE STUDENT: "In order to pass this test, you must transport this unconscious casualty (indicate casualty) using the fireman's carry. The casualty has no visible injury. Use the regular method of raising the casualty to his feet when performing the carry. Begin."

(Version 2)

TELL THE STUDENT: "In order to pass this test, you must transport this unconscious casualty (indicate casualty) using the pistol-belt carry. The casualty has no visible injury. Here are your materials (point to pistol belts). Begin."

Performance Checklist: IS0824, Lesson 14, Section II.

VERSION 1: FIREMAN'S CARRY

	GO	NO GO
Straddles the casualty, facing casualty's head.	_____	_____
Puts his hands under the casualty's chest and locks his hands.	_____	_____
Raises casualty to knees and walks backward.	_____	_____
Moves backward until casualty's knees lock.	_____	_____
Walks forward until casualty is standing.	_____	_____
Lifts casualty's arm and moves under the arm to stand facing the casualty while continuing to support the casualty.	_____	_____
	GO	NO GO

Places his arms around casualty's waist and places one foot between casualty's feet.	_____	_____
Raises casualty's arm, stoops or bends over, and pulls casualty across shoulders.	_____	_____
Places his free arm between casualty's legs, brings hand around leg, and transfers grasp of casualty's wrist to that hand.	_____	_____
Rises to standing position with casualty supported across shoulders and one hand free.	_____	_____
Takes at least two steps forward without falling or dropping casualty.	_____	_____
OVERALL EVALUATION (A no-go on any step gives an overall evaluation of no-go.)	GO _____	NO GO _____

Performance Checklist: IS0824, Lesson 14, Section II.

VERSION 2: PISTOL-BELT CARRY

	GO	NO GO
Forms a sling by joining two fully extended pistol belts together to form one large loop.	_____	_____
Slips the sling under the casualty so the top part of the sling is under the lower back, the bottom part of the sling is under his thighs and a loop end extends from each side.	_____	_____
Lies between the casualty's legs on his back.	_____	_____
Thrusts arms through the loop ends and slips them over his shoulders.	_____	_____
Grasps the casualty's wrist and trouser leg (on same side).	_____	_____
Rolls onto his abdomen so both are in a prone position.	_____	_____
Releases the casualty's wrist and leg and pushes himself up on his knees.	_____	_____
Rises to his feet without injuring himself or the casualty.	_____	_____
Takes at least two steps forward without falling or dropping casualty.	_____	_____
OVERALL EVALUATION (A "no go" on any step gives an overall evaluation of "no go".)	GO _____	NO GO _____

SECTION III TWO-MAN CARRIES

15-16. MOVE A CASUALTY USING THE TWO-MAN FORE-AND-AFT CARRY

The two-man fore-and-aft carry is used to transport a conscious or unconscious casualty and is the preferred two-man carry for moving a casualty for a long distance.

Position the casualty on his back with his arms by his side.

The taller of the two bearers kneels at the casualty's head and faces toward the casualty's feet, slides his hands under the casualty's arms and across the casualty's chest, and locks his hands together over the casualty's chest.

The second bearer spreads the casualty's legs, kneels between the casualty's legs with his back to the other bearer, and grasps under the casualty's knees.

Both bearers rise together, lifting the casualty.

Both bearers walk forward with the casualty.

15-17. MOVE A CASUALTY USING THE TWO-MAN SUPPORT CARRY

This two-man support carry is used to transport a conscious or unconscious casualty, but is especially useful if the casualty is conscious since he may be able to walk or hop with assistance.

Bearers kneel on each side of the casualty and face the same direction as the casualty.

Each bearer takes the casualty's arm nearest the bearer, brings it around his neck, and grasps the casualty's wrist with his outside hand.

Each bearer puts his other arm around the casualty's waist.

Both bearers rise in unison, lifting the casualty.

> If the casualty is unconscious, the bearers should not release the casualty's wrists.
>
> If the casualty is taller than the bearers, the bearers can remove their arms from the casualty's waist and use them to lift and support the casualty's thighs. This keeps the feet from dragging.

Bearers walk forward with the casualty.

15-18. MOVE A CASUALTY USING THE TWO-MAN ARMS CARRY

The two-man arms carry can be used to move a conscious or unconscious casualty for a moderate distance.

> More than two bearers may be required if the casualty is heavy or if the casualty's head or legs need additional support.

Position the casualty on his back and place his hands on his abdomen.

Both bearers position themselves on the same side of the casualty--one at the casualty's chest and one at his thighs.

Both bearers kneel on one knee.

The bearer at the casualty's chest slips one arm beneath the casualty's shoulders and the other arm beneath his waist.

The bearer at the casualty's thighs slips one arm beneath the casualty's hips and the other arm beneath his knees.

Both bearers shift their weight backward in unison and lift the casualty to knee level, keeping the casualty as level as possible.

Both bearers bring the casualty's front close to their chests.

Both bearers rise to their feet in unison.

Both bearers move forward, carrying the casualty high on their chest to lessen fatigue.

15-19. MOVE A CASUALTY USING THE TWO-HAND SEAT CARRY

The two-hand seat carry can be used to move a conscious or unconscious casualty for a short distance.

Position the casualty on his back.

Bearers position themselves on opposite sides of the casualty's hips and kneel.

Each bearer passes one arm under the casualty's back and the other arm under the casualty's thigh.

The bearers grasp each other's wrists securely.

Both bearers rise in unison, lifting the casualty.

Both bearers move forward, carrying the casualty.

15-20. MOVE A CASUALTY USING THE FOUR-HAND SEAT CARRY

The four-hand seat carry is used to carry a conscious casualty who can help support himself while he is being carried. This carry is especially useful in transporting a person with a head or foot injury for a moderate distance.

Both bearers position themselves behind the casualty.

Bearers face each other. Each bearer grasps his own left wrist with his right hand and grasps the other bearer's right wrist with his left hand. The bearer's forearms form the seat for the casualty.

The casualty stands on his own or another soldier helps the casualty to a standing position.

Both bearers lower their bodies so the seat is about even with the casualty's knees.

The casualty sits on the bearers' forearms and places his arms around the bearers' shoulders for balance and support.

Both bearers stand erect in unison, lifting the casualty.

Both bearers move forward.

SECTION IV LITTER CARRY

NOTE TO INSTRUCTOR: Either construct the improvised litters discussed in the following as you discuss their construction or have the improvised litters already assembled.

15-21. MAKE AN IMPROVISED POLE AND PONCHO LITTER

Obtain two tent poles (or straight tree limbs) and a poncho.

Open the poncho and lay it flat on the ground.

Lay two poles lengthwise across the poncho so the poncho is divided into thirds.

Reach in and pull the hood toward you and lay it flat on the poncho. Make sure the drawstrings are not hanging out of the hole.

Fold one outer third of the poncho over the pole.

Fold the other outer third of the poncho over its pole.

The weight of the casualty will keep the litter from coming apart.

15-22. MAKE AN IMPROVISED POLE AND JACKET LITTER

Obtain two tent poles (or straight tree limbs) and two or three field jackets (or heavy shirts).

Close (zip or button) the garments.

Turn the garments inside out, but leave the sleeves inside. (Having buttons and zippers inside keeps them from catching on bushes.)

Pass the poles through the sleeves.

15-23. MAKE AN IMPROVISED POLE AND SACK LITTER

Obtain two tent poles (or straight tree limbs) and two empty, heavy-fabric sacks such as potato sacks.

Cut holes in the two corners of the closed end of each sack.

Place the sacks lengthwise with the open end of the sacks facing each other.

Slide the poles or limbs through the holes.

Overlap the open ends of the sacks about three inches to provide extra strength in the middle of the litter.

15-24. MAKE AN IMPROVISED BLANKET LITTER

Lay a blanket on the ground.

Roll two opposite edges of the blanket toward the middle. The rolled edges of the blanket will serve as grips.

15-25. EVACUATE A CASUALTY BY LITTER

NOTE TO INSTRUCTOR: Use assistant instructors or students as litter bearers. Use an assistant instructor as a simulated casualty. Describe the procedures as the assistants demonstrate them.

A casualty is usually placed on a litter using the modified two-man arms carry or modified two-man fore-and-aft carry.

Normally, four soldiers are used to transport the litter. The litter team, however, can be composed of more or fewer members based upon the military situation and the distance and terrain to be covered.

a. General Rules

Tell the casualty what you are going to do in order to calm his fears and get his cooperation.

Walk around the casualty rather than stepping over him.

Make sure needed treatment procedures (tourniquets, splints, etc.) have already been performed before transporting the casualty unless immediate transportation is needed to save the casualty's life.

Have one person give instructions so actions will be performed in unison.

Avoid causing additional injury to the casualty when placing him on the litter and moving the casualty.

b. Position Casualty and Litter

Position the casualty on his back with his arms at his side. Place the litter (standard or improvised) near and parallel to the casualty.

c. Place Casualty Onto Litter Using the Modified Two-Man Arms Carry

Two litter bearers kneel on one knee by the casualty's side (opposite side from litter).

One bearer slips his arms under the casualty's back and waist.

The other bearer slips his hands under the casualty's hips and knees.

Both bearers lift in unison upon command from the leader.

Bearers move the casualty over the litter or have another soldier push the litter under the casualty.

Bearers lower the casualty onto the litter in unison upon the leader's command.

d. Place Casualty Onto Litter Using the Modified Two-Man Fore-and-Aft Carry

One bearer kneels behind the casualty's head and slips his arms under the casualty's arms and across his chest; then locks his hands together.

The other bearer spreads the casualty's legs apart and squats or kneels between the casualty's legs while facing the first bearer.

Both bearers rise in unison upon the leader's command.

Bearers move the casualty over the litter.

Bearers lower the casualty onto the litter in unison upon the leader's command.

e. Lift Litter Using a Four-Man Litter Carry

The leader of the litter team positions himself at the handle nearest the casualty's right shoulder and directs the other bearers.

Each of the three other litter bearers positions himself at one of the handles, faces the same direction as the leader (casualty is usually carried feet first), and kneels on the knee nearest the litter.

Upon command, the litter bearers stand up, lifting the litter in unison, and move the casualty to the aid station or collection point.

15-26. CLOSING

Helping to evacuate casualties from the battlefield is one of the functions of the combat lifesaver. You will probably be the most knowledgeable person in the litter squad and must be prepared to act as the leader of the squad.

Ask for questions or comments.

15-27. STUDENT PRACTICE AND EXAMINATION

Have students form three-man teams and take turns constructing improvised litters, placing a simulated casualty (student) on the litter, and lifting the litter. Then have the teams practice two-man carries with the students taking turns being the casualty. Observe the students and correct any errors noted.

This lesson is tested using the performance checklist in the student examination booklet. The basic checklist is given on the following pages. It is recommended that you also have students practice performing the other two-man carries described in this lesson. The examination may be administered at the end of the practice session.

Return to Table of Contents

CHECKLIST SECTION III & IV
TRANSPORT A CASUALTY

VERSION 1: Pole and poncho improvised litter (unconscious casualty).

VERSION 2: Pole and jacket improvised litter (unconscious casualty).

NOTE TO EVALUATOR: Have an assistant or another student be the simulated casualty. Position the casualty on his back. Have an assistant or another student be the second litter bearer. Tell the second litter bearer that he is only to do what the student being tested tells him to do.

MATERIALS NEEDED:

Two poles.
Poncho (Version 1) or two jackets (Version 2), or similar materials.

Situation

TELL THE STUDENT: "In order to pass this test, you must make an improvised litter using these materials (indicate poles and poncho or jackets). Then you must place the unconscious casualty (indicate casualty) on the litter using the modified two-man fore-and-aft carry and lift the casualty and litter. Your assistant (indicate second bearer) can help you place the casualty onto the litter and lift the litter, but you must instruct him in providing assistance. Begin."

	GO	NO GO
POLE AND PONCHO LITTER		
Opens the poncho so it is flat on the ground.	_____	_____
Lays two poles lengthwise across the poncho, dividing the poncho into thirds.	_____	_____
Arranges the hood and draw strings so they will not catch on objects.	_____	_____
Folds one outer third of the poncho over its pole, then folds the other outer third of the poncho over its pole.	_____	_____
POLE AND JACKET LITTER		
Closes (buttons, zips) garments close.	_____	_____
Turns garments inside out, leaving the sleeves on the inside.	_____	_____
Lays garments on ground so one is above the other and passes poles through sleeves	_____	_____

	GO	NO GO
One bearer kneels behind the casualty's head, slips arms under the casualty's arms and across the casualty's chest, and locks his hands together.	_____	_____
Other bearer squats (kneels) between casualty's legs facing first bearer and grasps under the casualty's knees.	_____	_____
Bearers lift casualty, move the casualty over the litter, and lower the casualty onto the litter in unison without dropping the casualty.	_____	_____
Bearers position themselves between poles in front of and behind litter and lift litter in unison.	_____	_____
Casualty does not fall from litter.	_____	_____
OVERALL EVALUATION (A no-go on any step gives an overall evaluation of no-go.)	GO _____	NO GO _____

Return to Table of Contents

COMBAT LIFESAVER COURSE IS0826
Instructor Manual

IS0825, COMBAT LIFESAVER: MEDICAL TASKS

Lesson 16: OVERVIEW

Equipment and Supplies Needed:

Combat lifesaver aid bag with all contents displayed.

Personnel Needed:

Instructor (primary instructor, if possible).

Assistant Instructors, as needed.

References:

AR 350-41, Training in Units.
FM 21-11, First Aid for Soldiers.
Soldiers Training Publications (STP) 8-91B15-SM-TG, Soldier's Manual and Trainer's Guide: MOS 91B, Medical Specialist, Skill Levels 1/2/3/4/5.
STP 21-1-SMCT, Soldier's Manual of Common Tasks, Skill Level 1.
STP 8-91-SM CMF 91 General Medical Tasks.

16-1. INTRODUCTION

NOTE TO INSTRUCTOR: If desired, the first part of the lesson can be given by the course manager or other person who then turns the remainder of the program over to the primary instructor. The students are welcomed and the purpose and functions of the combat lifesaver are described.

Welcome students.

Introduce yourself and your role.

Introduce other instructors and assistant instructors. Briefly state their roles.

Discuss any special instructions.

You have already been tested on your ability to perform the buddy-aid tasks which every soldier is expected to know and perform. The tasks you will now learn are tasks normally performed by the 91B (W) combat medic. The most important task you will learn is to initiate an intravenous infusion. Initiating an intravenous infusion will help to control shock caused by blood loss, severe burns, or severe heat injury.

OBJECTIVE

TASK

Identify the functions of the combat lifesaver and the contents of the combat lifesaver aid bag.

CONDITIONS

Given multiple-choice items pertaining to the role of the combat lifesaver and to the combat lifesaver aid bag.

STANDARD

Score 70 or more points on the 100-point written examination.

EXPLANATION

16-2. IDENTIFY THE PURPOSE OF THE COMBAT LIFESAVER

The Army doctrine was developed to be used on a battlefield in which combat elements are widely dispersed. This will create a problem for the Army Medical Department as well as the rest of the Army.

Since the combat elements will be spread out and constantly on the move, it will be difficult for medical personnel such as the combat medic to quickly reach battlefield casualties.

Part of the doctrine calls for regular, nonmedical soldiers to be given training in providing additional emergency care to wounded soldiers. This care will help a wounded soldier to survive those first few crucial minutes after he is wounded and help stabilize the soldier until trained medical personnel can treat him. The name given to this nonmedical provider of far-forward emergency care is the combat lifesaver.

Remember, as a combat lifesaver, your primary function is to accomplish your combat mission. You are to provide emergency care as a secondary mission when your primary mission allows. You may also be asked to assist the combat medic (Health Care Specialists MOS 91W) in providing care and preparing casualties for evacuation when you have no combat duties to perform.

Normally, each squad, team, crew, or equivalent-sized unit will have at least one member trained to function as a combat lifesaver.

16-3. IDENTIFY TASKS PERFORMED BY THE COMBAT LIFESAVER

Combat lifesaver training is a bridge between the self-aid/buddy-aid training given all soldiers during basic training and the medical training given to the combat medic.

In addition to being proficient in all self-aid/buddy-aid tasks, the combat lifesaver performs the following tasks:

Initiate an intravenous infusion.

Measure and monitor a casualty's pulse.

Measure and monitor a casualty's respirations.

Apply a SAM splint to a fractured limb.

Insert an oropharyngeal airway in an unconscious casualty.

Manage battle fatigue.

Identify and treat cold injuries in addition to frostbite.

Administer first aid to blister, choking, and blood agent casualties and provide additional treatment to nerve agent casualties.

Transport a casualty using various litter carries.

Load casualties onto military vehicles.

16-4. IDENTIFY MEDICAL SUPPLIES CARRIED BY THE COMBAT LIFESAVER

NOTE TO INSTRUCTOR: Prepare a table with all of the components of the combat lifesaver aid bag shown. If possible, have two aid bags -- one with the contents spread out and one with the contents packed inside the bag. The individual components of the combat lifesaver aid bag are then identified and their uses described. Hold up each item as you discuss it. Make sure all students can see the item. Assistant instructors may monitor additional displays if the group is large. A copy of the same chart as the students have is on page 4 of this lesson. Below are explanations for you to give the students.

The combat lifesaver carries a small aid bag containing his medical supplies. The aid bag weighs a little over nine pounds and takes up about 0.44 cubic feet. The aid bag consists of the following items:

One roll of adhesive tape. Used to secure the I.V. catheter and tubing to the casualty's arm.

Two artificial airways. Used to keep the airway of an unconscious casualty open.

Five atropine autoinjectors. Used to administer additional antidote to nerve agent casualties.

Eighteen self-adhesive bandages with attached sterile pad. Used to protect minor wounds.

What is usually called an "ace" bandage is a gauze elastic kling bandage. While the combat lifesaver does not bandage sprains, this bandage can be useful as a reinforcement bandage and as padding for a splint.

Six muslin bandages. Used to secure splints and used as tourniquet bands, slings, and swathes.

Nylon case. Used to carry the medical supplies. The case has three zippered compartments for storing supplies and a shoulder strap.

Two catheter and needle units. Used in administering intravenous infusion.

Five CANA autoinjectors. Used to alleviate convulsions in nerve agent casualties.

Four field first-aid dressings. Used to control bleeding and protect wounds.

One field dressing 11-3/4 In.

Three pairs of rubber sterile patient examining gloves. Used when initiating I.V.s for the protection of both casualty and combat lifesaver.

Two intravenous injection sets. Connects the I.V. bag to the needle and catheter unit. The clamp controls the rate at which the fluid flows from the bag.

Twelve packets of povidone-iodine impregnated cotton pads. Used to cleanse skin, especially before performing the I.V. puncture.

Twelve isopropyl Alcohol pads.

Two I.V. bags. Each bag contains slightly more than a pint of sterile fluid to be administered intravenously to avoid hypovolemic shock.

One pair of scissors. Used to cut the casualty's clothing to expose wounds, cut muslin bandages into triangular bandages, and cut tape.

One SAM splint. Used in splinting fractured limbs.

Six tubes drain 1x18"

One tube tracheal

Usually, the combat lifesaver's unit will perform the needed stock rotation. If the combat lifesaver maintains his own bag, he must replenish his supplies in accordance with his unit's standing operating procedures (SOP).

During combat, the combat lifesaver can obtain additional supplies from combat medics, battalion aid stations or other nearby medical treatment facilities and from ambulances.

16-5. CLOSING

Remember that the combat lifesaver performs emergency care as a secondary mission only when his primary combat mission allows.

This lesson is tested in the written multiple-choice examination.

Ask for questions or comments.

NSN	NOMENCLATURE	QTY
6510009268882	Adhesive tape, surgical, 1 in	1 SP
6515006878052	Airway pharyngeal, large adult	1
6515009582232	Airway pharyngeal, small adult	1
6505009269083	Atropine injection aqueous type 0.7Ml syringe with needle	5
6510009137909	Bandage adhesive 3/4 X 3 inches flesh	18
6510000583047	Bandage gau4- 1/2"	2
6510002011755	Bandage muslin compressed brown 37 X 37 X 52" triangular w/pins	6
6545009129870	Case medical instrument and supply set polyamide nylon nonrigid	1
6515013156227	Catheter & needle unit, d12 I.V. 18ga radiopaque, disp	2
6505012740951	Diazepam injection USP, 5mg/2ml syringe-needle unit	5
6510001594883	Dressing first aid field camouflaged 4"w X 6.25-7.25"lg, abs	4
6510002017425	Dress FLD 11-3/4IN	1
6515002267692	Gloves, exam lrg	3 PR
6515014721863	Intravenous injection	2
6510010100307	Pad povidone-iodine impre, ster 2 X 1.375" brown	12
6510007863736	Pad isopropyl alcohol	12
6505013723425	Sodium Chloride Inj.	2
6510014640826	Sponge Surg 2X2	12
6515009357138	Scissors bandage 1.5"Cut lg. 7.25" O/a lg both blades blunt crs	1
6515012254681	Splint universal 36 X 4.5" malleable alum radiolucent ltwt	1
6515011885316	TUBE DRAIN 1X18"	6
6515014205264	TUBE TRACHEAL	1

COMBAT LIFESAVER MEDICAL EQUIPMENT SET

Return to Table of Contents

IS0825, COMBAT LIFESAVER: MEDICAL TASKS

Lesson 17: INITIATE AN INTRAVENOUS INFUSION FOR HYPOVOLEMIC SHOCK

Equipment and Supplies Needed:

I.V. fluids (Sodium Chloride Inj NSN 6505013723425).

Intravenous injection sets (NSN 6515014721863).

Catheter and needle unit, intravenous 18 gauge (NSN6515013156227).

Constricting band/tube drain 1x18" (NSN 6515011885316).

Cleansing Pads (povidone-iodine impregnated cotton pad, (NSN 6510010100307).

Scissors (7 1/4 inch bandage scissors, NSN 6515009357138).

Adhesive tape (1 inch width surgical camouflaged, NSN 6510005260162).

Adhesive bandages (NSN 6510009137909).

Pad Isopropyl Alcohol (NSN 6510007863736

Gloves to put on before administering an I.V. to a live subject (preferably NSN 6515002267692).

Gauze pads (if desired).

Intravenous infusion training devices. (Intravenous Therapy Trainer, NSN 6910 01 080 2844, DCV 08-05, is described in DA Pam 310-12, Index and Description of Army Training Devices and is available through your local TSC. Other training devices can be purchased commercially. Check with your local TSC before ordering any training device. A wooden arm--I.V. tubing attached to a board and covered with a surgical glove--can also be used.)

Personnel Needed:

Instructor (PA, 91W 30, 92B30, or other medical person experienced in initiating I.V.s and who can handle an emergency should one occur).

Assistant Instructor(s) (91W, 92B, or other medical personnel experienced in initiating I.V.s). Students may be divided into groups with each group supervised by an assistant instructor.

References:

FM 21-11, First Aid for Soldiers.
STP 8-91B15-SM-TG, MOS 91B Medical
Specialist, Skill Levels 1/2/3/4/5.
STP 21-1-SMCT, Soldier's Manual of Common Tasks, Skill Level 1.

17-1. INTRODUCTION

Hypovolemic shock is a condition caused by a sudden decrease in the volume of fluid in the body's blood circulatory system. This condition can be fatal. The combat lifesaver must be prepared to initiate an intravenous infusion (I.V.) to add fluid to the casualty's circulatory system. The sooner the casualty receives I.V. fluids, the more rapid the improvements in his condition.

OBJECTIVES

TASK: Initiate an intravenous infusion (I.V.).

CONDITIONS: Given needed supplies and a simulated casualty.

STANDARD: Score a GO on the performance checklist.

EXPLANATION

NOTE TO INSTRUCTOR: If transparencies are used, an assistant (not the person performing the demonstration) should show the transparencies.

17-2. IDENTIFY SIGNS AND SYMPTOMS OF HYPOVOLEMIC SHOCK

NOTE TO INSTRUCTOR: Describe the causes and the signs and symptoms of hypovolemic shock.

Hypovolemic shock is caused by a loss of fluid or blood from the casualty's circulatory system. It is usually caused by rapid or severe bleeding or by serious (second and third degree) burns over at least 20 percent of the body. Excessive fluid loss can also result from vomiting, diarrhea, or heat injuries such as profuse sweating and dehydration. Signs and Symptoms of Hypovolemic Shock include the following:

Severe bleeding from wounds or large burned areas on skin.

Anxiety.

Mental confusion.

Ask casualty questions that cannot be answered by a simple yes or no, such as, "What is your name. What is the month? What day of the week is it? Where are we?"

Changes in the level of consciousness. (The casualty may quickly go from fully alert to unconscious.)]

Restlessness and agitation.

Irregular or fluctuating pulse in early stages, weak and rapid pulse in later stages.

Pulse rate over 100 beats per minute.

Cool, clammy skin.

Change in skin color (from normal to pale, bluish, or grayish tint).

Rapid, shallow breathing.

Thirst, dry mouth.

Nausea or vomiting.

17-3. PERFORM PRELIMINARY MEASURES TO TREAT A CASUALTY FOR HYPOVOLEMIC SHOCK

NOTE TO INSTRUCTOR: Review the procedures for treating shock. If possible, demonstrate the procedures using the assistant instructor as the casualty.

Check the casualty for breathing. Take measures to restore breathing (mouth-to-mouth resuscitation, etc.) if needed. If the casualty is unconscious, monitor the casualty's breathing and perform mouth-to-mouth resuscitation if the casualty stops breathing.

Control major bleeding (field dressing, pressure dressing, and/or tourniquet as needed).

Dress and seal open chest wounds.

Dress open abdominal wounds and open head wounds.

Position the casualty on his back and place a log or folded jacket under his feet with his feet above the level of his heart.

ASK: When would you not elevate the casualty's feet?

Response: When the casualty has a suspected fracture of the thigh, leg, or ankle (unless the fracture has already been splinted).

When he has an open abdominal wound (casualty should be placed in flexed-knee position instead).

When he has an open chest wound (position casualty on injured side).

When he has an open head wound (have casualty sit up or lie on side with wound away from ground).

Loosen the casualty's clothing (tight clothing may interfere with circulation).

Clothing is not loosened in a chemical environment.

Start an intravenous infusion.

Keep the casualty from getting too warm or too cool.

Monitor his breathing and pulse.

17-4. PUT ON GLOVES

NOTE TO INSTRUCTOR: Cleanliness is the primary reason for wearing gloves. Universal precautions teach us additional reasons, too. Remind or teach the students about universal precautions concerning needle sticks, why used needles should be pushed into the ground, and how wearing gloves protects the casualty and the combat lifesaver from bloodborne diseases.

ASK: Why would you put on gloves before starting an I.V.?

Response: It will reduce the chance of infection resulting from the I.V. puncture. In addition to the cause for cleanliness, the gloves should be used because it is impossible to know which casualties are infected with conditions such as HIV, HBV, or other bloodborne diseases.

ASK: What would you do if you were in the field and could not put on gloves before starting the I.V.?

Response: Start the I.V. anyway.

17-5. GATHER AND CHECK I.V. SUPPLIES

NOTE TO INSTRUCTOR: If you have a large class, you may wish to divide the students into smaller groups, have an assistant with each group, and have a package laid out for each student group. Hold up each item and identify its purpose. Then demonstrate how to check the bags, sets, and catheter/needle units to ensure they are still sterile.

Obtain the following supplies from your aid bag:

2 bags of I.V. fluid.

2 intravenous injection sets.

2 catheter and needle units.

Constricting band.

Antimicrobial pads.

Scissors.

Adhesive tape.

Adhesive bandages.

Isopropyl alcohol pads

Check the I.V. Set, Catheter/Needle, and I.V. Bag

NOTE TO INSTRUCTOR: The student should check the I.V. bag for expiration date when he receives his kit and before going to the field. The unit should check the expiration dates every 30 days. Show him where the date is on the bag.

Check the I.V. set box and the catheter/needle protective packaging for tears and water marks. Discard if no longer sterile.

Tear the protective bag and remove the actual I.V. bag.

Check the bag for clarity of fluid and leaks. Discard if the expiration date has passed, if the inner bag has a leak, or if the fluid is discolored or has sedimentation.

Remove the I.V. set from the box. Discard the set if the tubing is cracked or discolored.

17-6. PREPARE THE I.V.

NOTE TO INSTRUCTOR: Identify the parts of the I.V. bag, I.V. set, and catheter and needle unit. Use another I.V. set and catheter/needle unit rather than opening the supplies to be used in the demonstration. Show how the needle and catheter separate. If transparencies are used, show Figure 17-1.

Identify the outlet port and expiration date on the I.V. bag; the spike, drip chamber, clamp, tubing, and adapter on the I.V. set; and the flash chamber, hub, catheter, and needle on the catheter/needle unit.

NOTE TO INSTRUCTOR: Demonstrate how to attach the I.V. set to the I.V. bag and remove air from the tubing. As you proceed, remind students of the importance of not touching sterile parts of the I.V. equipment once protective coverings have been removed and sterile surfaces exposed even though you're wearing gloves. Have an assistant lie down and be a simulated casualty. Make sure students can see all parts of the demonstration.

Remove the I.V. set from its protective bag.

Loosen the clamp (if needed); slip the clamp along the tubing until there is 6 to 8 inches of tubing between the clamp and the drip chamber; then tighten the clamp.

Remove protective covering from the I.V. fluid bag's outlet port without touching the end of the port.

Remove protective cap from spike on infusion set with a twisting motion. Do not touch the end of the spike.

Insert spike into the exposed I.V. outlet port with a twisting motion so the spike breaks the seal in the outlet port. Do not touch the end of the port or spike.

Hang bag on a stand or other object or hold bag up.

Squeeze the drip chamber until the drip chamber is half full of fluid.

ASK: What could happen if you do not remove the air from the tubing?

Response: Air could be forced into the casualty's circulatory system. The air bubble (air embolism) could cause the casualty's heart to stop beating (cardiac arrest).

Remove air from the tubing of the I.V. set.

NOTE TO INSTRUCTOR: If transparencies are used, show Figure 17-2. Note that the clamp shown in the figure is slightly different from the clamp on the I.V. set, but the principles are the same.

Hold the tubing above the bottom of the bag.

Loosen the clamp on the tubing.

Loosen or remove the protective cap over the adapter.

Gradually lower the tubing until the fluid reaches the end of the adapter.

Tighten the clamp fully and replace the protective cap over the adapter.

Protect tubing from becoming contaminated.

Loop tubing over I.V. stand or other object from which bag is hung, if applicable. The bag can also be placed on casualty's chest or under casualty's lower back.

Tear or cut 4 strips (about 4-inches in length) from the roll of tape and hang the strips on the I.V. bag.

17-7. SELECT AND PREPARE AN INFUSION SITE

NOTE TO INSTRUCTOR: Continue to use the assistant as the simulated casualty. If the class is too large for students to observe carefully, break the class into groups and have assistant instructors perform the procedures on each other and you explain the procedures. If transparencies are used, show Figure 17-3.

The infusion site is also called the venipuncture (puncture of the vein) site.

Position the casualty with his palm upward.

Select two possible sites.

NOTE TO INSTRUCTOR: Remind students to avoid areas around joints, areas where the pulse is palpable, areas near or below the injury site, and areas with scars, moles, or excessive hair.

ASK: I have found two possible injections sites where the vein is straight, springy and does not roll. Which site should I use for my first attempt?

Response: The more distal site (closest to the hand, farthest from the heart).

NOTE TO INSTRUCTOR: Once the site is selected, you may wish to allow students to feel site and have students pair off and find suitable infusion sites on each other. If so, evaluate each student's selection. Then proceed to prepare the infusion site on the simulated casualty, explaining the procedures as they are performed.

Place the constricting band around the casualty's arm 6 to 8 inches above the selected (distal) infusion site.

NOTE TO INSTRUCTOR: Apply the constricting band slowly so the students can see the procedure clearly. Remind students that the constructing band is not to remain in place for more than 2 minutes when they perform the procedure. If transparencies are used, show Figure 17-4.

Stretch the band slightly.

Wrap the band around the arm so one end is longer than the other.

Secure the band by looping the longer end and drawing the shorter end over the loop and under the tubing. This allows the band to be released using only one hand. Be sure the tails point away from the infusion site.

Tell the casualty, if conscious, to clench and relax his fist several times and then to keep his fist clenched. If unconscious, place the limb below the level of the heart.

Palpate (feel) the vein with your fingertips again.

Open a packet containing a povidone-iodine impregnated cotton pad and remove the pad.

NOTE TO INSTRUCTOR: Emphasize the use of spiral motion moving from the center outward. Emphasize that the cleansed site is not to be palpated or touched again. If transparencies are used, show Figure 17-5.

Cleanse the skin at the site with the pad beginning at the site and spiraling outwards. Using an isopropyl alcohol pad wipe the site once from proximal to distal.

17-8. INITIATE INFUSION

NOTE TO INSTRUCTOR: Demonstrate the procedures for inserting the catheter into the vein, connecting the catheter to the tubing, and controlling the flow of I.V. fluids. Continue to use the same casualty. Explain the procedures as you perform them.

Open the protective packaging of the catheter/needle unit.

Remove the unit from its protective packaging.

Grasp the stem (connected to the needle) with your dominant hand and the protective cap from the catheter/needle with your nondominant hand.

Remove the cap from the catheter/needle unit and discard the protective cap.

Hold the catheter/needle with the bevel of the needle up.

NOTE TO INSTRUCTOR: Explain that "bevel up," means the opening of the needle is on top and the hole can be seen. Emphasize that the needle tip and the catheter must not be touched. If transparencies are used, show Figure 17-6.

Place the thumb of your nondominant hand about 1 inch below the injection site and over the vein.

Press on the skin to make the skin over the injection site taut.

Position the needle slightly to the side of the vein at approximately a 20^{o} to 30^{o} angle to the surface of the skin with the bevel up.

NOTE TO INSTRUCTOR: If transparencies are used, show Figure 17-7.

Insert the bevel into the skin.

Lower the angle of the needle until it is almost parallel to the skin surface.

Insert the needle into the vein (a slight "give" may be felt) and hold the needle steady.

Look at the flash chamber and check for blood in the flash chamber.

NOTE TO INSTRUCTOR: Explain that this procedure is performed to ensure the needle is actually inside the vein. Remind students to pull the needle back somewhat and try again if no blood is present. If the retry is unsuccessful, they should release the constricting band, remove the needle, obtain the other catheter/needle unit, and try again at a point above the failed site. If the second site proves unsuccessful, they should **not** attempt again at a third site.

ASK: On the battlefield, what should you do if you try to start an I.V. on a casualty two times and both tries are unsuccessful?

Response: Evacuate the casualty.

Once blood is seen in the flash chamber, advance the catheter/needle unit about 1/8 of an inch farther to ensure that the catheter itself is in the vein.

Continue to hold the flash chamber with your dominant hand. Grasp the catheter hub with your other hand and thread the rest of the catheter (**not** the needle) into the vein (to the hub). **Never reinsert the needle back into the catheter.**

While holding the catheter hub with the nondominant hand, use a finger on that hand to press lightly on the skin over the catheter tip.

NOTE TO INSTRUCTOR: Explain that the pressure will help to keep blood from flowing from the vein and out the catheter when the needle is removed.

Remove the flash chamber and needle from the catheter with your dominant hand and lay the flash chamber and needle to one side.

NOTE TO INSTRUCTOR: Emphasize that the needle must not be reinserted into the catheter once it has been removed. Reinserting the needle could shear off a portion of the catheter, which could then enter the bloodstream, move to the heart, and possibly cause cardiac arrest.

Tell the casualty to unclench his fist.

Remove the constricting tubing. The constricting band should have been in place for less than two minutes.

NOTE TO INSTRUCTOR: Emphasize that you are continuing to hold the catheter in place and still maintaining pressure on the catheter with your nondominant hand while using your dominant hand to remove the constricting tubing.

Grasp the adapter end of the I.V. tubing with your dominant hand.

Remove the protective cap from the adapter.

Quickly insert the tip of the adapter tightly into the hub of the catheter.

Lift your finger from over the tip of the catheter.

Loosen the clamp on the tubing.

NOTE TO INSTRUCTOR: You may simulate adjusting the clamp and the drip rate and checking for infiltration instead of actually introducing fluids into the casualty's vein. If so, demonstrate how the drip chamber and clamp work (such as on an artificial arm) after you have completed the I.V. demonstration.

Check the drip chamber to make sure fluid is flowing.

Adjust the clamp so the fluid is flowing fast, but the fluid is seen as individual drops rather than as a steady stream of water.

ASK: Suppose the casualty has a head injury. What would you do differently?

Response: Adjust the clamp so the fluid is flowing at about 10 drops per minute.

NOTE TO INSTRUCTOR: Adjust the clamp so the flow rate is about 10 drops per minute.

Check the infusion site for infiltration (fluid leaking into surrounding tissue instead of entering the vein).

The infusion site is swollen, red, and cool to the touch.

The casualty has greater pain than expected.

Clear fluid is leaking from the site.

ASK: What would you do if the infusion site was infiltrated?

Response: Discontinue the I.V. and start another I.V. using a new needle at a site above the old (infiltrated) site.

17-9. SECURE THE I.V.

NOTE TO INSTRUCTOR: Demonstrate the procedures for securing the catheter and I.V. tubing in place. Explain the procedures as you perform them. Tell the students it may be necessary to clean the area (an alcohol prep or gauze pad can be used if carried) so the tape will stick. Also tell them that additional tape may be needed, especially if the tape is not sticking to the skin. If transparencies are used, show Figure 17-8. Explain that Figure 17-8 shows a gauze pad being placed over the catheter hub and adapter before the third strip of tape is applied.

Remove one tape strip from the bag and place diagonally across the catheter hub. Continue to keep the adapter and hub in place.

Remove a second strip and place across the hub forming an "X.

Remove the third strip of tape and place it across the adapter. The adapter and catheter are now secure.

NOTE TO INSTRUCTOR: If carried, a gauze pad can be placed over the hub and adapter before the third strip of tape is applied. The gauze helps to protect the site from dirt and other contamination.

Make a safety loop with the tubing. Secure the loop with the last piece of tape. The loop helps to prevent the catheter from being dislodged if the tubing is accidentally pulled.

Position the I.V. bag so fluid will flow from the bag, through the drip chamber and tubing, and into the casualty's vein.

If possible, hold the bag up or hang it from a limb or other object that is higher than the casualty's heart. Gravity will cause the fluid to flow.

If the bag cannot be hung or held, place the bag under casualty's lower back. Be sure that the drip chamber is completely full to prevent the introduction of air into the venous system. The pressure from the body will force fluid out of the bag.

ASK: What else can you do to control shock?

Response: Cover the casualty with a blanket or poncho if the weather is cool; shade casualty and remove excess clothing if it is hot. Continue to monitor the casualty's respirations and pulse.

17-10. REMOVE THE CATHETER

NOTE TO INSTRUCTOR: Demonstrate the procedures for removing the catheter. Continue to use the same simulated casualty. (This learning event is not part of the performance examination, but it is needed in case the infusion site becomes infiltrated or the fluid in the I.V. bag is exhausted.) Explain the procedures as you perform them.

Tighten the clamp on the tubing to stop the flow of fluid.

Loosen and remove the tape from the loop of I.V. tubing. Start at the ends of tape and loosen toward the middle.

Loosen and remove the strip of tape securing the adapter.

Loosen and remove the two strips of tape securing the catheter hub.

Remove the catheter from the vein by pulling it out at an angle almost parallel to the skin (the same angle used in inserting the needle).

Wipe the puncture site with an isopropyl alcohol pad to help protect the puncture wound from infection.

Cover the puncture site with an adhesive bandage. Explain that covering the site with an adhesive bandage will help to stop bleeding and prevent the puncture wound from becoming contaminated.

NOTE TO INSTRUCTOR: If you simulated the procedures for infusing fluids in para 17-8, demonstrate how to adjust the flow of I.V. fluids and determine drip rate. Put paper towels under the catheter to absorb the fluid or let the fluid run into a sink.

17-11. CLOSING

Remember, the basic treatment procedures for treating a casualty are: make sure the casualty is breathing adequately, control serious bleeding, and control shock.

If a casualty has lost a good deal of blood, the most important procedure other than promptly controlling the bleeding is to initiate an I.V. to control hypovolemic shock. The quicker the casualty receives intravenous fluids, the better his chances for surviving. An I.V. can be maintained while the casualty is being evacuated. If a medic arrives before the casualty is evacuated, he can maintain the I.V. and administer additional fluids using the same catheter and tubing.

Initiating an I.V. is probably the most challenging task in your Combat Lifesaver training.

Ask for questions or comments.

STUDENT PRACTICE AND EXAMINATION

Determine the number of practice groups to be used based upon the number of students in the class and the number of assistant instructors and I.V. training devices available.

Divide students into groups with an assistant instructor with each group. Pass out the training devices and needed supplies. If appropriate, fill the bag of the training device with a red liquid (water and food coloring, for example) to simulate blood.

Tell students to perform all of the steps for initiating an I.V. on the trainer, including the use of the constricting band.

Have students take turns giving I.V.'s under your supervision or under the supervision of an assistant instructor. Correct any errors made by the students. Have students practice until they have mastered the mechanics of administering an I.V.

Question students about signs of infiltration and what they should do if these signs are present.

Ask for questions or comments.

When you are satisfied that a student is ready to be tested by performing an I.V. puncture on a live simulated casualty, administer the performance examination contained in the student's examination booklet. Have students pair off and take turns initiating an I.V. on each other. A copy of the basic performance checklist follows the illustrations. Stress that the clamp is to remain closed once the adapter is connected to the catheter/needle unit so fluid will not actually be introduced into the simulated casualty's vein. The students also remove the I.V. catheter and treat the puncture site, but these steps are not part of the performance test.

If a student must be retested, you may wish to use another person, such as an assistant instructor, as the simulated casualty. If possible, avoid using a person whose veins cause unusual difficulty.

Be prepared to handle any emergency that may arise.

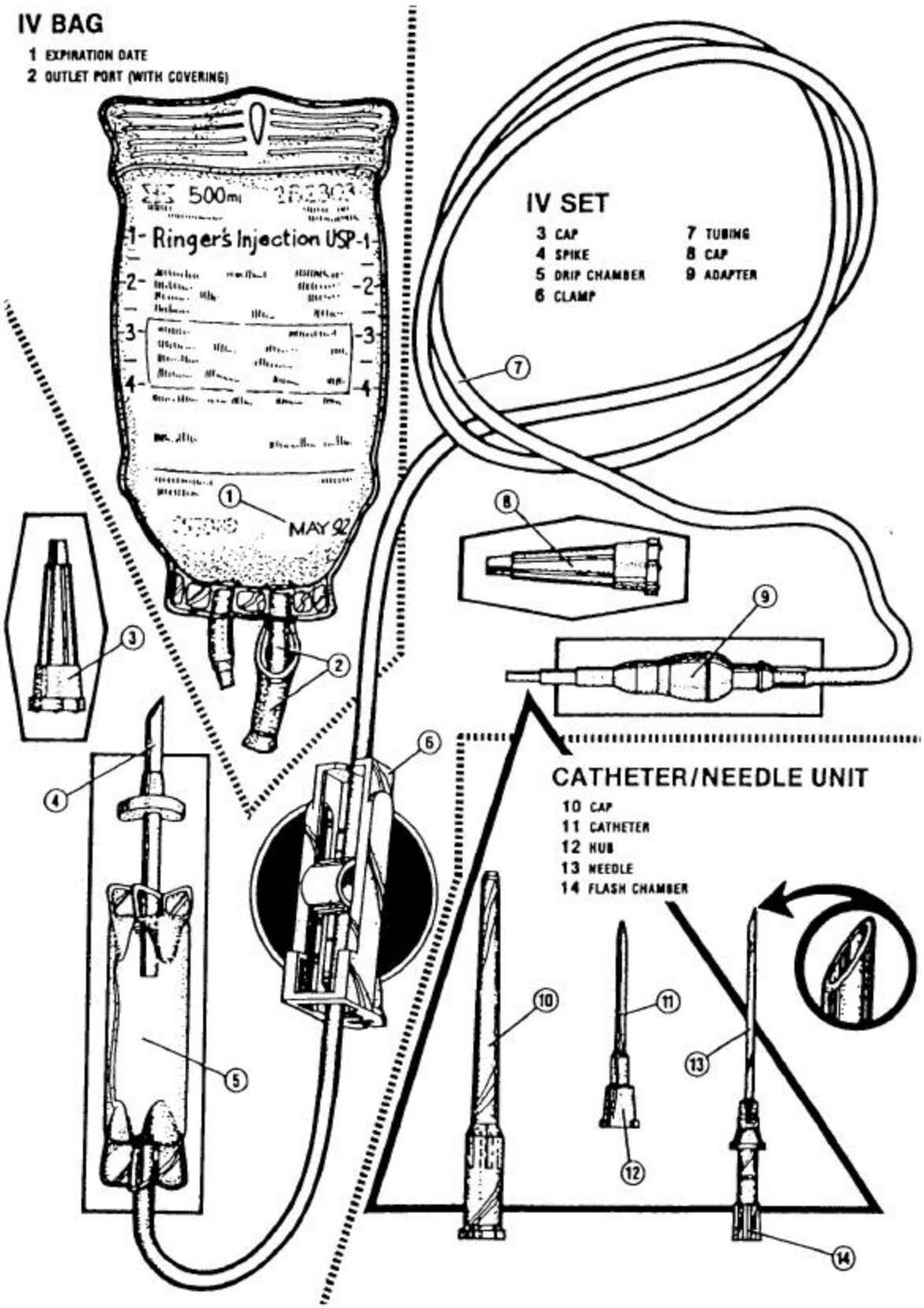

FIGURE 17-1. I.V. BAG, I.V. SET, AND CATHETER/NEEDLE UNIT

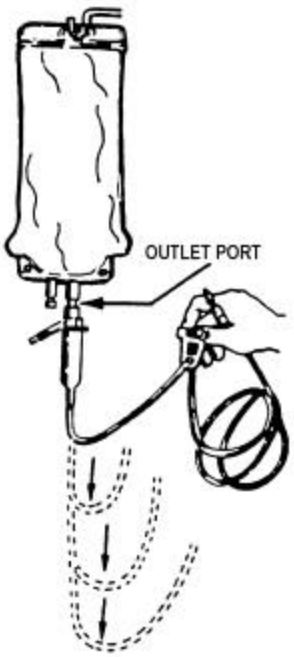

FIGURE 17-2. REMOVING AIR FROM THE TUBING

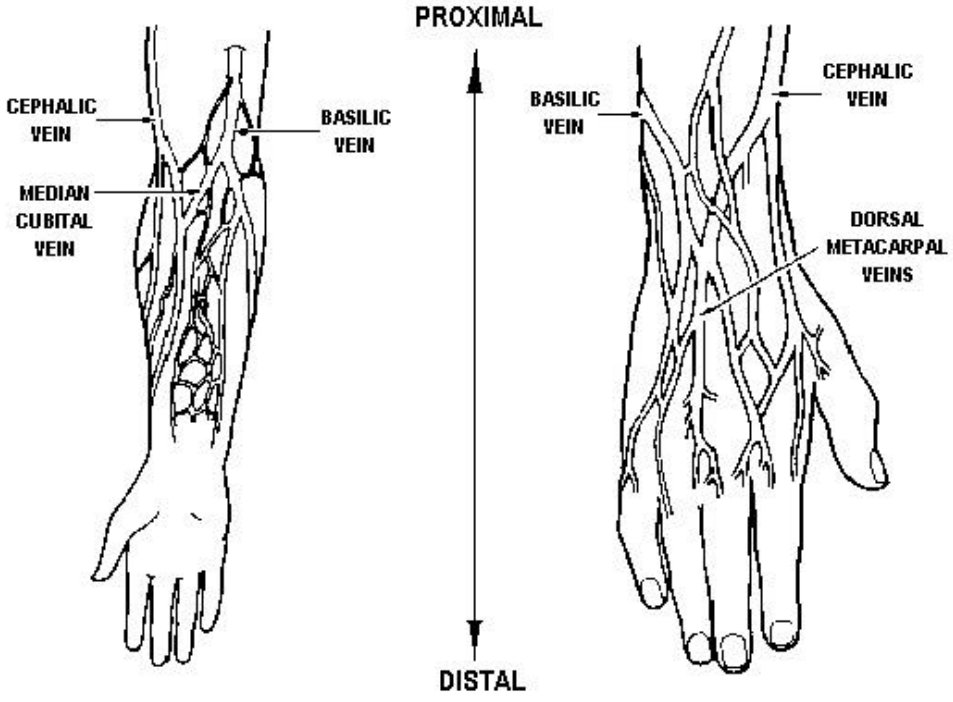

FIGURE 17-3. SELECTING AN INFUSION SITE

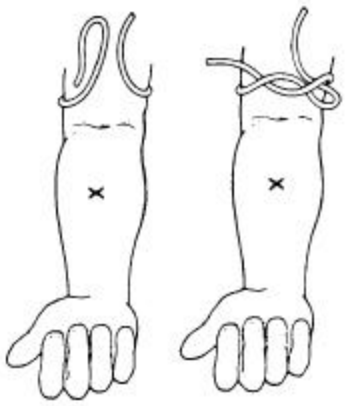

FIGURE 17-4. APPLYING A CONSTRICTING BAND

FIGURE 17-5. CLEANSING THE INFUSION SITE.

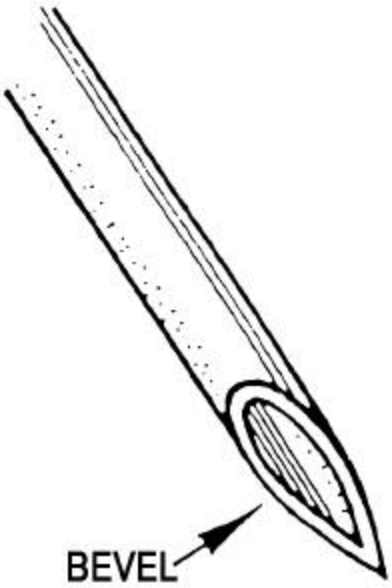

FIGURE 17-6. NEEDLE WITH BEVEL UP

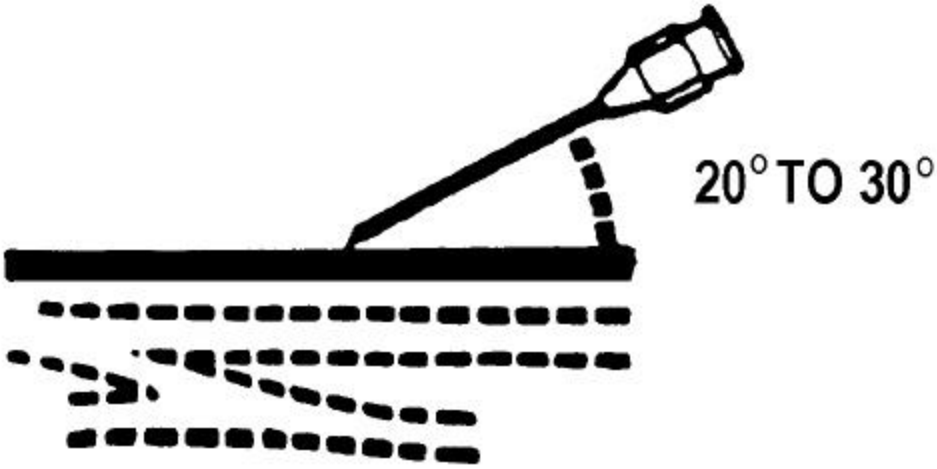

FIGURE 17-7. INSERTING THE BEVEL

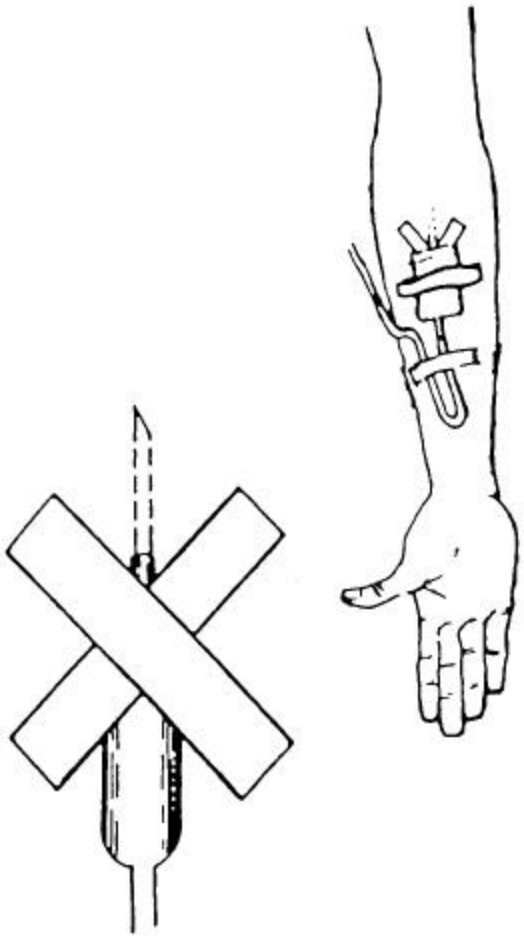

FIGURE 17-8. SECURING THE I.V.

PERFORMANCE CHECKLIST LESSON 17
INITIATING AN INTRAVENOUS INFUSION

Determine the number of I.V. testing stations to be set up. This will depend upon the number of qualified evaluators available and the facility being used. Set out the needed supplies (see Equipment and Supplies on following page) at each station. (Two I.V. bags, two I.V. sets, and two catheter/needle units can be set out so the student can discard supplies accidentally contaminated; the aid bag contains two bags, two sets, and two catheter/needle units.)

Divide the students into pairs and assign them to stations. Assign one member of each pair to be the casualty and the other to be the combat lifesaver.

After the performance checklist has been completed, have the combat lifesaver remove the needle, apply antimicrobial ointment to the puncture site, and apply a dressing to the puncture site. This is not part of the checklist. Assist the student as needed.

After the "combat lifesaver" has completed his performance test, have the students switch roles and replace used supplies.

The evaluator can ask a question in order to clarify what a student did, such as checking for leaks or for drips in the drip chamber. If an evaluator sees a dangerous situation, such as the needle being inserted improperly, he can stop the procedure, tell the student why he was stopped, and give him a NO-GO for that attempt.

A student who fails the performance test can be retested. He should be told why he failed and what he should have done. A student should be allowed at least 3 attempts. The course director may wish to establish policy for approving more than 3 attempts.

PREPARE THE STUDENTS:

Have the "combat lifesaver" put on his gloves.

Have the "casualty" remove his shirt to expose his arm and lie down. [An assistant instructor can be used instead of another student.]

Initiate the student evaluation form.

When both students are ready, read the "Situation" to the "combat lifesaver."

MATERIALS NEEDED

Timepiece with a second hand (for evaluator).

I.V. fluids (Sodium Chloride Inj NSN 6505013723425)--2 bags.

Intravenous injection sets (preferably NSN 6515014721863)--2 sets.

Catheter and needle unit, intravenous 18 gauge (NSN6515013156227).-- 2 units

Constricting band/tube drain 1x18", (NSN 6515011885316)

Cleansing Pads (preferably povidone-iodine impregnated cotton pad, (NSN 6510010100307).

Scissors (preferably 7 1/4 inch bandage scissors, NSN 6515009357138).

Adhesive tape (preferably 1 inch width surgical camouflaged, NSN 6510005260162).

Adhesive bandages (To be used when the I.V. neddle is removed.(preferably NSN 6510009137909).

Pad Isopropyl Alcohol (NSN 6510007863736

Gloves to put on before administering an I.V. to a live subject (preferably NSN 6515002267692).

Gauze pads (if desired).

(I.V. stand or other device for hanging I.V. bag, if desired.)

Situation

TELL THE STUDENT: "You have evaluated a conscious casualty and determined that an intravenous infusion needs to be initiated. In order to pass this test, you must initiate an I.V. while maintaining sterility. You will insert the catheter and needle into the casualty's vein on his arm and perform all of the I.V. procedures except one. You will simulate infusing the I.V. solution into the casualty's vein instead of actually opening the clamp on the I.V. tubing. This will keep the I.V. solution from actually being introduced into the vein. When you are ready to open the clamp on the tubing, tell me what you would do if the situation were a real emergency. You may tell me what you are doing if you think it is not obvious, but do not waste time. Remember that the constricting band should not stay in place for more than 2 minutes. I may ask you questions during the procedure. Answer the questions quickly and continue performing the procedure. You have your supplies (indicate supplies). Start by putting on your gloves."

"You are now ready to start. Begin."

	GO	NO GO
(Puts on gloves.)		
Removes protective covering from I.V. bag and identifies any leaks, passed expiration date, or unclear solution.	___	___
Inspects infusion set and catheter/needle unit and identifies any cracks, water marks, or other damage.	___	___
Moves clamp on tubing away from the drip chamber and tightens the clamp.	___	___
Removes protective covering from outlet port without touching port tip.	___	___
Removes spike protective cap on infusion set without touching spike.	___	___

	GO	NO GO
Inserts spike into I.V. outlet port with a twisting motion without touching spike or port tip.	____	____
Holds (hangs) bag up and squeezes drip chamber until it is half-filled with solution.	____	____
Holds tubing above bottom of bag.	____	____
Releases or loosens clamp on tubing and loosens protective cap over the adapter.	____	____
Gradually lowers tubing until solution reaches adapter (air expelled from tubing) and reclamps tubing.	____	____
Retightens cap on adapter.	____	____
Tears/cuts strips of tape and hangs on bag or similar location. (NOTE: Can be done at later time.)	____	____
Looks and feels for vein.	____	____
Selects appropriate vein for infusion (not over a joint: free of scars, moles, and hair, etc.).	____	____
Applies constricting band above infusion site.	____	____
Instructs casualty to clench and relax fist, then to leave fist clenched.	____	____
Cleanses the selected infusion site with a povidone-iodine impregnated cotton pad beginning at the center of the site and spiraling outward. Uses alcohol pad and wipes site once from proximal to distal.	____	____
Removes protective cap from catheter/needle without touching the needle or catheter.	_____	_____
Pulls skin taut over injection site.	____	____
Positions needle with bevel up slightly to side of the selected vein at a 20^{o} to 30^{o} angle.	____	____
Inserts bevel of needle into skin, lowers angle, and inserts into vein.	____	____
Checks flash chamber for blood.		
(If no blood in chamber, withdraws catheter/needle slightly and inserts the needle into the vein.)	(___	___)
Threads catheter (up to hub) into the vein.	____	____
Removes flash chamber with needle without pulling catheter out of vein.	____	____

Asks casualty to unclench fist and releases constricting band.	____	____
	GO	NO GO
Constricting band has not been in place for more than 2 minutes (approximately).	____	____
Removes adapter cap and connects adapter into catheter hub.	____	____
SIMULATES opening clamp and checking flow of solution in drip chamber.	____	____
Secures hub with tape.	____	____
Secures adapter with tape.	____	____
Loops tubing on extremity and secures tubing with tape.	____	____
Checks for infiltration (asks casualty about pain; looks for swelling, redness, and leaking around site; feels for coolness.	____	____
	GO	NO GO
Question: What should you do if the infusion site is red, swollen, and cool to the touch?		
Answer: Discontinue the I.V. and attempt to initiate another I.V. above failed site.	____	____
OVERALL EVALUATION [Any no-go gives an overall evaluation of no-go.]	GO ____	NO GO ____

Return to Table of Contents

COMBAT LIFESAVER COURSE ISO826
Instructor Manual

IS0825, COMBAT LIFESAVER: MEDICAL TASKS

Lesson 18: MEASURE AND MONITOR A CASUALTY'S PULSE

Equipment and Supplies Needed:

Timepiece(s) with second hand (both student and instructor must refer to a timepiece.

Paper and pencils.

Overhead projector (if figures are converted to transparencies and shown).

Personnel Needed:

Instructor (PA, 91W 20/30 or other person experienced in taking vital signs).

Assistant Instructor(s) (91W etc.), as needed.

References:

FM 21-11, First Aid for Soldiers.
STP 8-91-SM, Soldier's Manual CMF 91: General Medical Tasks.
American Academy of Orthopaedic Surgeons.
Emergency Care and Transportation of the Sick and Injured, 4th edition. Park Hill, IL: George Banta Company, 1987.

18-1. INTRODUCTION

When you evaluate a casualty, you may need to take his pulse. Taking the casualty's pulse is an important step in identifying hypovolemic shock and in determining if additional antidote is to be administered to nerve agent casualties. In this lesson, you will learn to determine the number of pulse beats per minute and identify if the casualty's pulse rate, strength, and rhythm are normal or abnormal. By evaluating the casualty's pulse, you are really evaluating the effectiveness of the casualty's heart action.

OBJECTIVES

TASK:

Determine a casualty's pulse rate and describe the characteristics of the pulse.

CONDITIONS:

Given a simulated casualty and a timepiece with a second hand.

STANDARDS:

Score a GO on the performance checklist.

EXPLANATION

NOTE TO INSTRUCTOR: Students may be divided into groups with each group supervised by an assistant instructor. Demonstrate taking the pulse of an assistant instructor or student using each of the pulse sites presented in the lesson. Explain the steps as you demonstrate on the simulated casualty. Make sure each student can see the demonstration. In a small class, assistants may not be needed.

18-2. LOCATE THE PULSE SITE

When the heart pumps and forces blood into the arteries, the surge of blood creates a wave-like effect that can be felt by pressing gently on an artery. This effect is called the pulse. It is usually easier to feel the pulse if the artery is on top of a bony area such as the wrist or ankle or if the artery can be pressed against a fairly rigid structure such as the trachea in the neck.

a. Carotid Pulse

NOTE TO INSTRUCTOR: If transparencies are used, show Figure 18-1.

A common location for taking the pulse is the neck. There are two large arteries near the front of the throat which supply the head with blood. These arteries are called the carotid arteries.

One artery is located in a groove on the right side of the larynx and the other artery is located in a groove on the left side of the larynx. The artery on the casualty's left side is the left carotid artery and the artery on the casualty's right side is the right carotid artery. Either artery can be used to take the casualty's carotid pulse. Do not apply pressure to both carotoid arteries at the same time.

To locate the artery, place the middle and index fingers on the casualty's larynx, which is usually called the Adam's apple.

Move the fingers to the side until you feel the groove created by the muscles next to the trachea.

Press on the groove until you feel the pulse.

NOTE TO INSTRUCTOR: Have students find the carotid pulse site on their own throats. Tell students to raise their hands if they are having any trouble finding the pulse site. Provide assistance as needed.

ASK: Why don't you use your thumb when taking a casualty's pulse?

Response: The thumb has a pulse of its own. You may be taking your pulse instead of the casualty's pulse.

b. Radial Pulse

NOTE TO INSTRUCTOR: If transparencies are used, show Figure 18-2.

Another common location for taking the pulse is the wrist. When taking the pulse at the wrist, gently press the radial artery against the bones of the wrist. The radial pulse is taken

on the inside of the wrist near the base of the thumb. Do not use the back of the wrist. Either wrist can be used to take the casualty's radial pulse.

ASK: When would you need to take a casualty's radial pulse?

Response: You have applied a splint to a fractured arm and want to check the casualty's blood circulation below the splint.

NOTE TO INSTRUCTOR: Have students find the radial pulse site on their own wrist. Tell students to raise their hands if they are having any trouble finding the pulse site. Provide assistance as needed.

c. Other Pulse Sites

NOTE TO INSTRUCTOR: If transparencies are used, show Figure 18-3.

The temporal pulse is felt at the temple near the ear.

The brachial pulse is felt on the inside of the elbow.

The femoral pulse is felt in the groin area. The popliteal pulse is felt behind the knee.

The dorsalis pedis pulse is felt on top of the foot.

A pulse may also be felt directly over the heart on the left side of the casualty's chest. This pulse is called the apical pulse.

18-3. TAKE THE CASUALTY'S PULSE

Changes in the casualty's pulse rate and in the strength of the pulse beats indicate changes in the beating of the casualty's heart.

NOTE TO INSTRUCTOR: If transparencies are used, show Figure 18-4.

a. Palpate the Pulse Site

Place the tips of your index and middle fingers over the pulse site and press gently. Do not place your thumb on the pulse site.

b. Count the Pulse Beats for One Minute

Using a clock with a second hand, count the pulse for one full minute.

A normal pulse rate for an adult when resting is between 60 to 80 beats per minute. The average is 72 beats per minute.

A resting pulse rate of more than 80 beats per minute is a higher than normal pulse rate. This can be caused by shock, bleeding, heat, dehydration, fever, pain, emotions, and vigorous activity (such as running).

Tachycardia is an abnormal condition that exists when the casualty's pulse rate is over 100 beats per minute.

A resting pulse rate of less than 60 beats per minute is a lower than normal pulse rate which can be caused by heart disease and medications. A pulse rate below 60 may also occur in a soldier who is physically fit.

A pulse rate of less than 50 beats per minute is called bradycardia.

c. Classify the Strength of the Pulse

Regular -- Pulse is easy to feel and has even beats of good force.

Bounding -- Pulse is easily detected due to the exceptionally large amount of blood being pumped with each heartbeat.

Weak -- Pulse is difficult to detect due to a decreased amount of blood flowing through the arteries, usually due to bleeding or shock.

Absent -- Pulse cannot be detected, usually due to a blocked or injured artery or due to a lack of heart action.

ASK: At which pulse site will you probably feel the most distinct pulse?

Response: The carotid pulse site.

18-4. MONITOR THE CASUALTY'S PULSE

If you remain with the casualty for a significant amount of time, take the casualty's pulse periodically and note any significant changes in rate, rhythm, or strength of the casualty's pulse. Remember that an irregular or fluctuating pulse may indicate an early stage of hypovolemic shock and a weak and rapid pulse may indicate a more advanced stage of hypovolemic shock.

18-5. CLOSING

Taking a casualty's pulse is important in identifying shock and in evaluating a nerve agent casualty, which we will discuss shortly. In a chemical environment, you will need to count a chemical agent casualty's carotid pulse rate while wearing your protective gloves.

Ask for questions or comments.

STUDENT PRACTICE AND EXAMINATION

Have students pair off. Distribute paper and pencils to each pair.

Have one student of each pair find the radial pulse site on his partner's wrist.

Wait until all "combat lifesavers" have located the pulse.

TELL THE STUDENTS: "On the test, you must count the number of pulse beats that occurs during a full minute; that is, exactly 60 seconds. I will watch the clock for you this time. All you have to do is count the number of beats you feel. When I say, 'Start,' begin counting. When I say, 'Stop,' stop counting and write down the number of pulse beats you counted.

"Ready, start."

[Time 60 seconds.]

"Stop."

TELL THE STUDENTS: "Write down the pulse rate."

"Feel the casualty's pulse again. Write down the term that describes the strength of the casualty's pulse. Does it feel strong, weak, or normal?"

Have the same student find the carotid pulse site on his partner's neck.

Wait until all "combat lifesavers" have located the pulse.

TELL THE STUDENTS: "This time, you must count the number of pulse beats that occurs during a full minute without my help. You may stop anytime after I say, 'Start.' After you finish counting, write down the number of pulse beats you counted. Also write down whether the pulse felt strong, weak, or normal. Ready? Start."

After students are finished, have the students switch roles and repeat the above exercise.

Review the students' answers. Check any unusual readings by taking the pulse yourself or have an assistant check the pulse. Have students repeat the exercise, if needed.

This lesson is tested using the performance checklist in the student examination booklet. (The basic checklist is shown following the illustrations.) The examination may be administered at the end of the practice session or the examinations for Lessons 18 and 19 may be given at the same time.

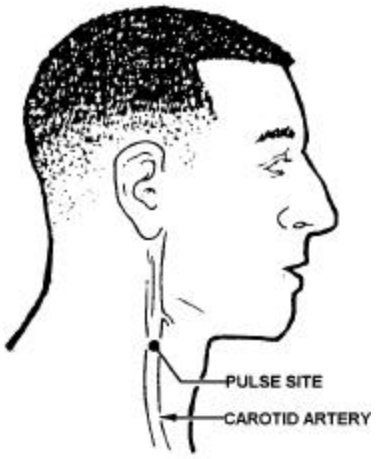

FIGURE 18-1. CAROTID PULSE SITE

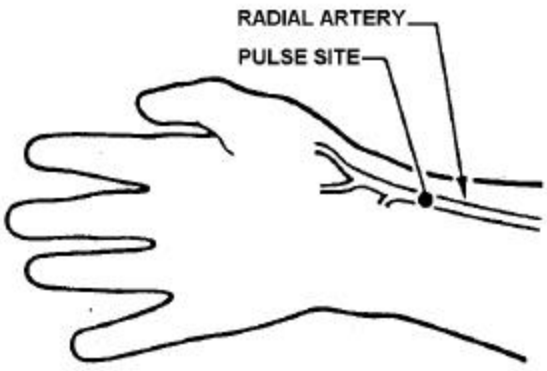

FIGURE 18-2. RADIAL PULSE SITE

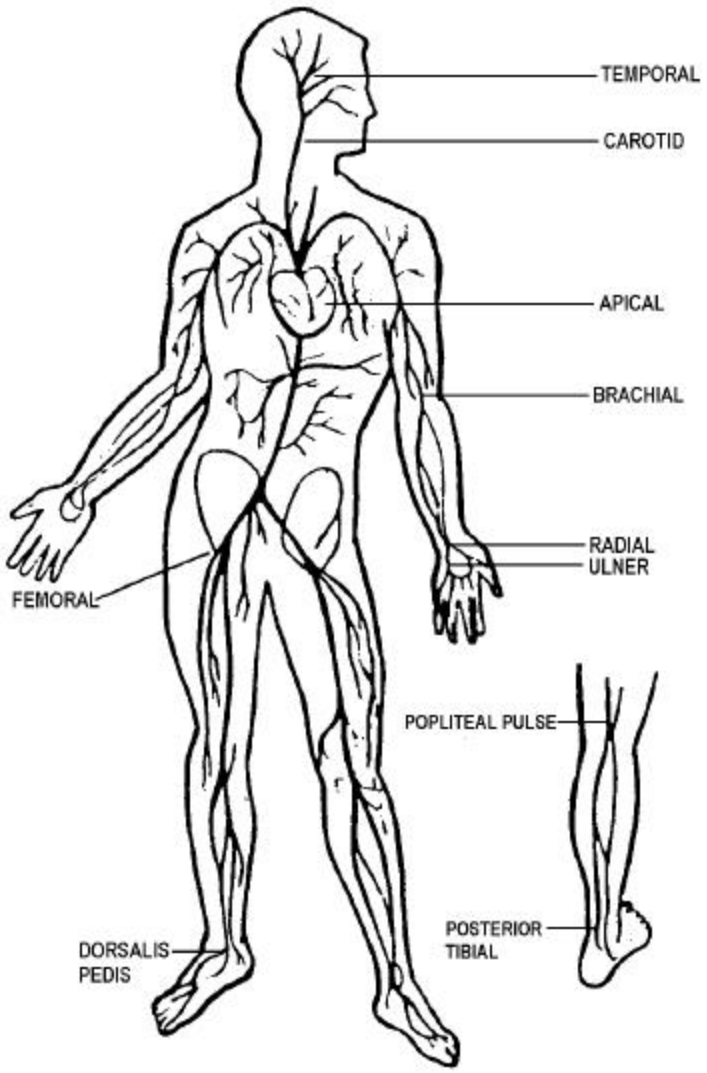

FIGURE 18-3. OTHER PULSE SITES

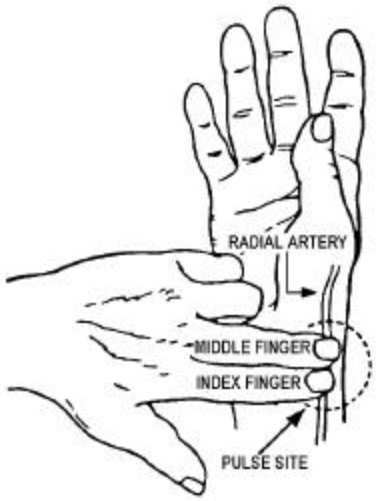

FIGURE 18-4. PALPATING THE RADIAL PULSE SITE

PERFORMANCE CHECKLIST
MEASURE AND MONITOR A CASUALTY'S PULSE

Divide the students into pairs. Students should not be with the same partner used during the practice exercise. Assign one member of each pair to be the casualty and the other to be the combat lifesaver. (Another method is to have a student or assistant be the simulated casualty for all other students.)

The evaluator should take the casualty's radial pulse while the student is taking the casualty's carotid pulse so pulse rates can be compared. The evaluator needs a timepiece with a second hand.

Have the "casualty" lie on his back with his neck (and wrist) exposed.

After the "combat lifesaver" has completed the task, have the students switch roles.

MATERIALS NEEDED

Watch or clock with second hand (students can furnish their own timepieces).

Paper and pencil (for student to write his results).

Situation

TELL THE STUDENT: "You are going to take a casualty's pulse to determine heart rate and to identify the pulse strength. Take the casualty's pulse using the carotid artery. Use (your watch/the timepiece provided). When you have finished, write down the casualty's pulse rate and a description of the strength. Then give the paper to me. Ready? Begin."

	GO	NO GO
Locates carotid pulse site in the groove along the casualty's neck.	_____	_____
Counts casualty's pulse for one full minute.	_____	_____
Pulse rate obtained by student is not more than 4 beats per minute from actual pulse rate.	_____	_____
Student's results _____		
Evaluator's results _____		
Pulse strength is correctly described (normal, strong, or weak).	_____	_____
OVERALL EVALUATION [Any no-go gives an overall evaluation of no-go.]	GO _____	NO GO _____

Return to Table of Contents

COMBAT LIFESAVER COURSE IS0826
Instructor Manual

IS0825, COMBAT LIFESAVER: MEDICAL TASKS

Lesson 19: MEASURE AND MONITOR A CASUALTY'S RESPIRATIONS

Equipment and Supplies Needed:

Timepiece(s) with second hand (both student and instructor must refer to a timepiece).

Paper and pencils.

Overhead projector (if figures are converted to transparencies and shown).

Personnel Needed:

Instructor (PA, 91B20/30, 91W or other person experienced in taking vital signs).

Assistant Instructor(s) (91B etc.), as needed.

References:

FM 21-11, First Aid for Soldiers.
STP 8-91-SM, Soldier's Manual CMF 91: General Medical Tasks.
American Academy of Orthopaedic Surgeons.
Emergency Care and Transportation of the Sick and Injured, 4th edition. Park Hill, IL: George Banta Company, 1987.

19-1. INTRODUCTION

Another term for breathing is respiration. It is the process of filling the lungs with fresh air, then expelling the air. While the air is in the lungs, some of the oxygen is removed from the air. The body uses the oxygen to obtain energy from the food we eat. This process, however, produces a gaseous by-product called carbon dioxide. The body must get rid of this waste product. When oxygen is removed from the air in the lungs, it is replaced with carbon dioxide. In this way, oxygen is inhaled and carbon dioxide is exhaled.

Normal breathing is easy and does not require effort. An unusually high or low breathing rate or difficulty in breathing usually indicates that the casualty has a problem requiring attention.

OBJECTIVES

TASK

Determine a casualty's respiration rate and describe characteristics of the respirations.

CONDITIONS

Given a simulated casualty and a timepiece with a second hand.

STANDARDS

Score a GO on the performance checklist.

EXPLANATION

NOTE TO INSTRUCTOR: This lesson can be combined with Lesson 18. Students may be divided into groups with each group supervised by an assistant instructor. Demonstrate counting and classifying the respirations of an assistant instructor or student. Explain the steps as you demonstrate on the simulated casualty. Make sure each student can see the demonstration. In a small class, assistants may not be needed.

19-2. COUNT THE CASUALTY'S RESPIRATIONS

You must carefully observe the casualty's chest for one full minute in order to determine his respiration rate. One respiration consists of one inhalation where the chest rises and one exhalation where the chest falls. You will get a more reliable count if the casualty is not aware that you are counting his respirations. If his attention is focused on his own breathing, he may change the rate, depth, and rhythm of his respirations. If you are monitoring a casualty, observe his respirations immediately after you check his pulse without letting the casualty know that you are through taking his pulse and are actually observing the rise and fall of his chest.

Have the casualty lie on his back.

Take the casualty's radial pulse for one full minute.

Without changing position, begin counting his respirations out loud.

Begin the time when the casualty begins to inhale. Do not count the respiration until the casualty has exhaled.

Count the casualty's respirations for one full minute.

ASK: I started timing the respirations when the casualty began to inhale. I counted the respirations when he completed the exhalation. Suppose he was just completing an inhalation when the 60 seconds ended. Would I count the inhalation as a respiration?

Response: No. The casualty must complete both an inhalation and an exhalation before it is counted.

19-3. LOOK FOR CHARACTERISTICS OF NORMAL AND ABNORMAL RESPIRATION

The normal range of respiration rates in an adult when resting is 12 to 20 respirations per minute. A breathing rate that is slower than 12 respirations per minute or faster than 20 respirations per minute may indicate a problem affecting the casualty's ability to get and absorb oxygen.

NOTE TO INSTRUCTOR: Demonstrate or have an assistant demonstrate each of the following breathing rates and depths as you discuss them.

A respiration rate below 12 respirations per minute is called slow.

A respiration rate above 20 respirations per minute is called rapid.

Normal respiration is deep and even. The rib cage expands fully. Contraction and relaxation of the diaphragm can be detected by observing the casualty's abdomen.

In shallow breathing, the chest and abdomen move very little.

A pattern of shallow, slow respirations is called hypoventilation.

A pattern of rapid, deep respirations is called hyperventilation.

If the respirations are shallow and rapid, the casualty is said to be short of breath.

Irregular breathing rhythm, labored breathing, and noises (such as wheezing) produced during breathing may indicate the presence of injury or illness.

ASK: What medical term is used to describe difficulty in breathing?

Response: Dyspnea.

19-4. MONITOR THE CASUALTY'S RESPIRATIONS

If you remain with the casualty, you must monitor his breathing. If his breathing stops and you are not in a chemical environment, you must administer mouth-to-mouth or mouth-to-nose resuscitation. Even if his breathing does not stop, changes in respiration rate, depth, and regularity may indicate that his condition is improving or becomes worse. Report abnormalities and changes to medical personnel.

19-5. CLOSING

Normal breathing should be effortless and even in rhythm, and should not produce noise or discomfort. Any change from normal breathing can be a warning sign that the casualty is in trouble.

Ask for questions or comments.

Return to Table of Contents

STUDENT PRACTICE AND EXAMINATION

If Lessons 18 and 19 are combined, the students can practice counting respirations when they finish taking the casualty's carotid pulse. Otherwise, have the students divide into pairs. The "casualty" should lie on his back and breathe normally while the "combat lifesaver" counts for one full minute. After the count is completed, the students switch roles and repeat the practice.

This lesson is tested using the performance checklist in the student examination booklet. (The basic checklist is shown on the following pages.) The examinations for Lessons 18 and 19 may be given together.

PERFORMANCE CHECKLISTMEASURE AND MONITOR A CASUALTY'S RESPIRATIONS

Divide the students into pairs. Assign one member of each pair to be the casualty and the other to be the combat lifesaver. (Another method is to have a student or assistant be the simulated casualty for all other students.)

The evaluator should count and observe the casualty's respirations while the student is taking the casualty's respirations so rates can be compared. The evaluator needs a timepiece with a second hand.

Have the "casualty" lie on his back.

After the "combat lifesaver" has completed the task, have the students switch roles.

MATERIALS NEEDED

Watch or clock with second hand (students can furnish their own timepieces).

Paper and pencil (for student to write his results).

Situation

TELL THE STUDENT: "You are going to determine the casualty's respiration rate and identify any abnormal characteristics. Use (your watch/the timepiece provided). When you have finished, write down the casualty's respiration rate and a description of any unusual characteristics. Then give the paper to me. Ready? Begin."

	GO	NO GO
Counts casualty's respirations for one full minute.	_____	_____
Respiration rate obtained by student is not more than 2 respirations per minute from actual respiration rate.	_____	_____
Student's results _____		
Evaluator's results _____		
Correctly identifies any signs of abnormal respiration (labored or difficult breathing, shallow breathing, noises accompanying breathing, etc.).	_____	_____

OVERALL EVALUATION [Any No Go gives an overall evaluation of no-go.]	GO	NO GO
	_____	_____

Return to Table of Contents

COMBAT LIFESAVER COURSE IS0826
Instructor Manual

IS0825, COMBAT LIFESAVER: MEDICAL TASKS

Lesson 20: APPLY A SAM SPLINT TO A FRACTURED LIMB

Equipment and Supplies Needed:

SAM splints [NSN 6515 01 225 4681].

Muslin bandages [NSN 6510 00 201 1755].

Overhead projector (if figure is converted to a transparency and shown).

Personnel Needed:

Instructor (PA, 91W 20/30 or other person experienced in applying splints).

Assistant Instructor(s) (91W etc.), as needed.

References:

FM 21-11, First Aid for Soldiers.
STP 21-1-SMCT, Soldier's Manual of Common Tasks: Skill Level 1.
American Academy of Orthopaedic Surgeons.
Emergency Care and Transportation of the Sick and Injured, 4th edition. Park Hill, IL: George Banta Company, 1987.
Instruction sheet included with SAM splint.

20-1. INTRODUCTION

You have already completed a performance examination on splinting a fractured limb using an improvised splint. Your combat lifesaver aid bag contains a rolled up splint, called the SAM (Splint, Aluminum Malleable) splint, which can be used to immobilize certain fractures. The splint is also referred to as the universal splint or splint, aluminum, malleable. The splint is made of aluminum with a foam covering that serves as padding. In this lesson, you will practice applying this splint.

OBJECTIVES

TASK:

Apply a SAM splint to a fractured limb.

CONDITIONS:

Given a simulated casualty with a fractured limb and a SAM splint.

STANDARDS:

Score a GO on the performance checklist.

EXPLANATION

NOTE TO INSTRUCTOR: Demonstrate applying a SAM splint to a fracture of the forearm, lower leg, and upper arm. Use an assistant instructor as the simulated casualty, if possible. If an assistant is not available, use a student. Make sure each student can see the demonstration. Explain the steps as you demonstrate on the simulated casualty. In a large class, students may be broken into groups with two assistant instructors demonstrating the splinting as you describe the procedures.

20-2. PREPARE THE CASUALTY FOR APPLICATION OF THE SPLINT

NOTE TO INSTRUCTOR: Have the casualty lie on his back with his forearm exposed.

ASK: My evaluation indicates that the casualty has a fractured forearm here. (Point to the middle of the casualty's forearm.) I have already exposed the fracture site. What do I need to do before I begin splinting the limb?

Response: Take the casualty's pulse below the fracture site.

Check for a pulse below the fracture site.

ASK: What would I do if no pulse is present?

Response: Splint the limb and evacuate the casualty as soon as possible.

ASK: I found a pulse. The forearm looks deformed to me. Should I straighten the forearm before I splint it?

Response: No.

20-3. APPLY THE SAM SPLINT TO A FRACTURE OF THE FOREARM, WRIST, LOWER LEG, OR ANKLE

NOTE TO INSTRUCTOR: If transparencies are used, show Figures 20-1, 20-2, 20-3, 20-4, 20-5.

a. Fractured Forearm or Wrist

Unroll the SAM splint and flatten it.

Fold the SAM splint in half so it is a tall V-shape.

Bend the edges of the splint in until the shape of the splint generally conforms to the curve and shape of the limb being splinted. (Each half of the splint will have a U-shape.) Bending the edges also increases the rigidity of the SAM splint.

Prepare cravats from muslin bandages to be used in securing the splint.

ASK: If muslin bandages are not available, what could you use as securing material.

Response: Strips of cloth from a blanket or clothing or the tape from the aid bag.

Apply the SAM splint to the forearm so the bend is at the elbow and the fracture is between the two sides of the splint. Adjust the shape of the SAM splint to conform to the limb, if needed.

ASK: I am going to secure the SAM splint using these cravats. Where should I apply the cravats?

Response: At least one cravat above the fracture site and at least one below the fracture site.

Secure the splint using at least two cravats. Secure the splint above the fracture site and below the fracture site.

ASK: Should I also apply a cravat over the fracture site?

Response: No.

Tie the tails of the cravats in a nonslip knot on the outside of the splint. Tuck the ends of the tails into the cravat to prevent accidental entanglement when the casualty is moved.

Check the casualty's pulse below the most distal cravat. Loosen the cravats and reapply the splint, if needed. Periodically check distal pulse to ensure that swelling has not compromised the pulse.

Quickly apply a sling and swathe to further immobilize the fracture.

b. Fractured Lower Leg or Ankle

NOTE TO INSTRUCTOR: Remove the SAM splint from the casualty's forearm and flatten the splint. Tell the students that you will demonstrate applying the SAM splint to a fractured lower leg using the same general procedures used for the fractured forearm.

Quickly shape the splint.

Check the casualty's pulse below the fracture site. Loosen footgear, if needed.

Apply the splint to the casualty's lower leg with the bend on the bottom of the footgear.

Secure the splint with cravats.

Check the casualty's pulse below the most distal cravat.

20-4. APPLY THE SAM SPLINT TO A FRACTURE OF THE UPPER ARM (HUMERUS)

NOTE TO INSTRUCTOR: Remove the SAM splint from the casualty's leg and flatten the splint. Tell the students that you will demonstrate applying the SAM splint to a fracture of the upper arm.

Fold the SAM splint into an irregular (uneven) V-shape so one side of the V is about 4 to 6 inches shorter than the other.

Bend the edges of the splint so the sides of the splint are U-shaped and generally conform to the shape of the limb being splinted.

Prepare the cravats.

Apply the SAM splint to the fractured limb so the short side is in the casualty's armpit (but not pressing on the armpit), the long side extends to the shoulder, and the upper arm is between the two sides of the splint.

Adjust the shape of the SAM splint to conform to the limb, if needed.

Secure the splint using at least two cravats. Secure the splint above the fracture site and below the fracture site. Do not apply a cravat directly over the fracture site.

Tie the tails of the cravats in a nonslip knot on the outside of the splint and tuck in the tails.

Check the casualty's pulse below the most distal cravat.

20-5. CHECK THE CASUALTY

ASK: What should I do after I have secured the splint?

Response: Check the casualty's circulation.

Check the casualty's pulse below the most distal cravat.

ASK: What should I do if I felt a pulse before applying the splint, but not after applying the splint?

Response: Loosen the cravats, make sure the end of the splint is not pressing into the armpit, and retie the cravats.

ASK: What should I do if the casualty does not have a pulse below the fracture even after I reapply the splint?

Response: Evacuate the casualty as soon as possible.

ASK: What else can I do to immobilize the fracture?

Response: Apply a sling and swathe.

Quickly apply a sling and swathe to further immobilize the fracture.

20-6. CLOSING

The SAM splint provides you with a prepadded rigid object from which a splint can be made. It is especially useful when other rigid objects cannot be obtained easily.

Ask for questions or comments.

Return to Table of Contents

STUDENT PRACTICE AND EXAMINATION

Have students pair off. One student acts as the casualty while the other student applies the SAM splint to a suspected fracture of the forearm and to a suspected fracture of the humerus.

After the student has practiced applying a splint to both fractures, have the students switch roles and repeat the exercise.

Observe the students and correct any errors noted.

This lesson is tested using the performance checklist in the student examination booklet. (The basic checklist is shown following the illustrations.) The examination may be administered at the end of the practice session or given with the examinations for Lessons 17 and 18.

Figure 20-1. SAM SPLINT ROLLED UP

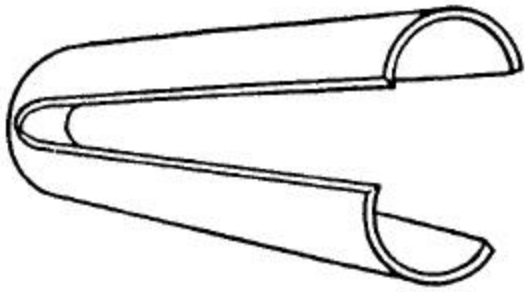

Figure 20-2. SAM SPLINT FOLDED IN HALF AND EDGES BENT

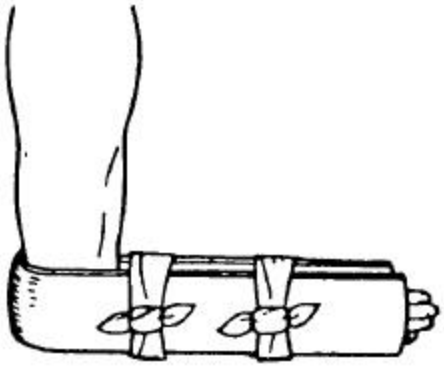

Figure 20-3. SAM SPLINT APPLIED TO A FRACTURED FOREARM
After splinting the fractured forearm, add a sling and swathe.

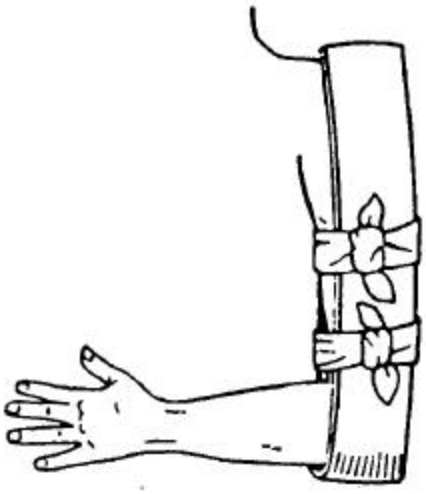

Figure 20-4. SAM SPLINT APPLIED TO A FRACTURED HUMERUS
After splinting a fractured humerus, add a sling and swathe.

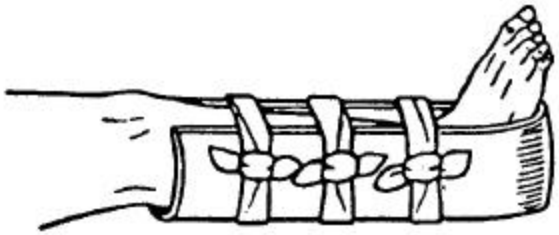

FIGURE 20-5. SAM SPLINT APPLIED TO A FRACTURED LEG OR ANKLE

PERFORMANCE CHECKLIST
APPLY A SAM SPLINT TO A FRACTURED LIMB

VERSION 1: Upper arm fractured (midway between elbow and shoulder).

VERSION 2: Lower leg fractured (few inches above ankle).

Divide the students into pairs. Assign one member of each pair to be the casualty and the other to be the combat lifesaver. (Another method is to use an assistant as the simulated casualty.)

Have the "casualty" lie down and expose the fractured limb. (If the leg is fractured, have the casualty remove footwear and sock.) Use a grease pencil or other instrument to indicate the location of the fracture on the casualty's limb.

After the "combat lifesaver" has completed his performance test, have the students switch roles. The second student should be tested on the alternate version.

MATERIALS NEEDED

SAM splint [NSN 6515 01 225 4681]

Muslin bandages--4 [NSN 6510 00 201 1755]

Situation:

TELL THE STUDENT: "You are going to apply a SAM splint to a casualty's fractured (upper arm/lower leg). The location of the fracture is indicated by this mark (point to fracture mark)."

[Version 1: "Even though on the battlefield you would add a sling and a swathe, you do not need to apply them for this task."]

[Version 2: "You have removed the casualty's boot and sock to evaluate a wound on the foot. This wound will play no part in this test."]

"These are your materials (indicate materials). Ready? Begin."

	GO	NO GO
Checks circulation below the fracture site.	____	____
Upper Arm. Forms SAM splint into an irregular V-shape with one end longer than the other, then bends edges.	____	____
Lower Leg. Forms SAM splint into a regular V-shape with edges bent.	____	____
Does not try to straighten the fractured limb.	____	____
Applies the splint so the fracture is between the two sides of the splint. (If upper arm, short end of the "V" is between arm and body with long end extending above the shoulder.)	____	____

	GO	NO GO
Applies at least two cravats to secure splint in place (one above the fracture, the other below the fracture) with no cravat applied over the fracture site.	_____	_____
Cravats tied using a nonslip knot with knot tied over the splint (not on flesh).	_____	_____
Checks circulation below the cravats.	_____	_____
(Loosens cravats, repositions splint if needed, and reties cravats if splint and/or cravats are interfering with blood circulation.)	(____	____)
Cravats adequately secure the splint so the splint will not slip off.	_____	_____

OVERALL EVALUATION [Any no-go gives an overall evaluation of no-go.]	GO	NO GO
	_____	_____

Return to Table of Contents

COMBAT LIFESAVER COURSE IS0826
Instructor Manual

IS0825, COMBAT LIFESAVER: MEDICAL TASKS

Lesson 21: INSERT AN OROPHARYNGEAL AIRWAY IN AN UNCONSCIOUS CASUALTY

Equipment and Supplies Needed:

Oropharyngeal airways [NSN 6515 00 300 2910 and NSN 6515 00 300 2900].

Manikin designed for insertion of artificial airway, if available.

Overhead projector (if figure is converted to a transparency and shown).

Personnel Needed:

Instructor (PA, 91W 20/30 or other person experienced in inserting artificial airways).

Assistant Instructor(s) (91W etc.) as needed.

References:

STP 8-91B15-SM-TG, Soldier's Manual and Training Guide: MOS 91B, Medical Specialist, Skill Levels 1 and 2.

American Academy of Orthopaedic Surgeons. Emergency Care and Transportation of the Sick and Injured, 4th edition. Park Hill, IL: George Banta Company, 1987.

21-1. INTRODUCTION

You have already been tested on your ability to open a casualty's airway and administer mouth-to-mouth resuscitation. Part of the task requires you to keep the casualty's airway open while you treat other injuries. This may be a problem in an unconscious casualty. You can use one of the oropharyngeal airways in your aid bag to help keep the unconscious casualty's airway open while you check for injuries.

OBJECTIVE

TASK:

Identify procedures for inserting an oropharyngeal airway in an unconscious casualty.

CONDITIONS:

Given written items pertaining to the oropharyngeal airway (J-tube) and its use.

STANDARD:

Score 70 or more points on the 100-point written examination.

EXPLANATION

NOTE TO INSTRUCTOR: If possible, use an appropriate manikin to demonstrate measuring and inserting an oropharyngeal airway. If a manikin is not available, use an assistant instructor as the simulated casualty. Simulate inserting the oropharyngeal airway if an assistant is used. Make sure each student can see the demonstration. Explain the steps as you demonstrate on the simulated casualty. In a large class, students may be broken into groups with assistant instructors demonstrating the techniques as you describe the procedures.

21-2. IDENTIFY WHEN THE OROPHARYNGEAL AIRWAY IS USED

The oropharyngeal airway (Figure 21-1)is only used with an unconscious casualty. Be aware of or suspect spinal injury in an unconscious casualty and maintain in-line stability if an oropharyngeal airway is used

Do not insert the oropharyngeal airway if the casualty is conscious or semiconscious. The airway could cause the casualty to gag and vomit.

ASK: Why would it be dangerous for the casualty to vomit?

Response: The casualty could inhale some of the vomit that could then obstruct his airway.

21-3. DETERMINE WHICH OROPHARYNGEAL AIRWAY IS THE APPROPRIATE SIZE

Place the oropharyngeal airway along the outside of the casualty's jaw with one end of the airway at the bottom tip of the casualty's ear.

Close the casualty's mouth and bring the other tip of the airway toward the corner of the casualty's mouth.

The airway should reach from the bottom tip of his ear to the corner of his mouth.

Repeat the steps using the other oropharyngeal airway and choose the one that is nearest the correct size.

ASK: Why is it important that the airway be of the appropriate size?

Response: If the airway is not the correct size, it could injure the casualty's throat or even obstruct his airway.

The right size keeps the casualty's tongue from falling down the back of his throat.

21-4. INSERT THE OROPHARYNGEAL AIRWAY

NOTE TO INSTRUCTOR: If a manikin is to be used, perform the procedures twice, once with the airway outside the mouth so the students can see the insertion and twisting and again with the airway actually in the manikin's mouth.

Position the casualty on his back.

Place your thumb and index finger of one hand on the casualty's upper and lower teeth near a corner of his mouth so the thumb and finger will cross when the casualty's mouth is opened.

Push your thumb and index finger against the casualty's upper and lower teeth in a scissors-like motion until his teeth separate and his mouth opens. Do not place your fingers inside the casualty's mouth.

Place the tip end of the airway into the casualty's mouth. Make sure the tip is on top of the tongue. (Figure 21-2)

Point the tip of the airway up toward the roof of the casualty's mouth.

Slide the airway along the roof of the casualty's mouth, following the natural curvature of the tongue.

When the tip of the airway reaches the back of the tongue past the soft palate, rotate the airway 180^{0} so the tip of the airway points toward the casualty's throat.

Advance the airway until the flange rests against the casualty's lips.

The airway should now be positioned so the tongue is held in place and will not slide to the back of the casualty's throat.

21-5. MONITOR A CASUALTY WITH AN OROPHARYNGEAL AIRWAY IN PLACE

Check the casualty's respirations to make sure he is still breathing adequately and the oropharyngeal airway is not blocking his airway. Adjust the position of the oropharyngeal airway, if needed.

ASK: Should you tie or tape the airway in place?

Response: No.

ASK: What should you do if the casualty begins to regain consciousness?

Response: Remove the airway.

21-6. CLOSING

Remember, only use the oropharyngeal airway on an unconscious casualty, never on a conscious or semiconscious casualty.

This lesson is tested in the written multiple-choice examination.

Ask for questions or comments.

Return to Table of Contents

STUDENT PRACTICE

Have students pair off and take turns measuring the airway to determine if it is appropriate for the "casualty." If time permits and a manikin is available, allow students to practice inserting the airway into the manikin's airway.

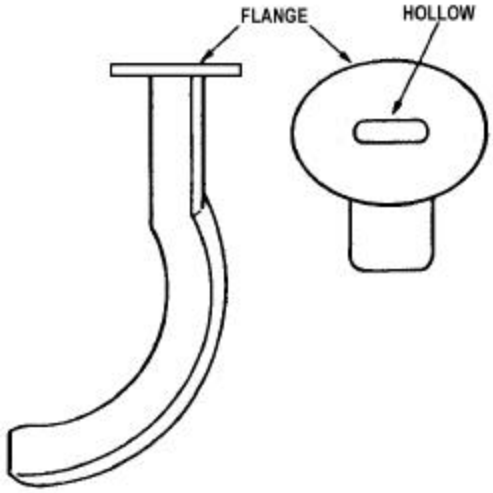

FIGURE 21-1. OROPHARYNGEAL AIRWAY (J-TUBE)

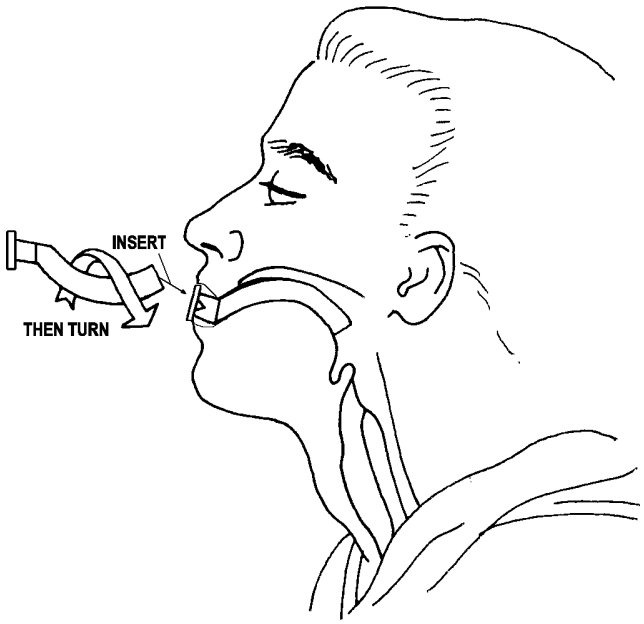

FIGURE 21-2. INSERTING THE OROPHARYNGEAL AIRWAY

IS0825, COMBAT LIFESAVER: MEDICAL TASKS

Lesson 22: ADMINISTER FIRST AID TO CHEMICAL AGENT CASUALTIES

Equipment and Supplies Needed:

Atropine autoinjectors [NSN 6505 00 926 9083].

Atropine autoinjector trainer sets.

Mark I trainer sets, if used.

CANA trainer sets, if used.

Protective mask with hood.

Chemical protective gloves.

Canteen (with water and basin, if desired).

Overhead projector (if figure is converted to a transparency and shown).

Personnel Needed:

Instructor (PA, 91W 20/30 or other person knowledgeable in treating chemical agent casualties.)

Assistant Instructor(s) (91W etc.), as needed.

References:

FM 8-285, Treatment of Chemical Agent Casualties and Conventional Military Chemical Injuries.
FM 21-11, First Aid for Soldiers.
STP 8-91B15-SM-TC, Soldier's Manual and Training Guide: MOS 91B, Medical Specialist, Skill Levels 1 and 2.

22-1. INTRODUCTION

You have already demonstrated your ability to initiate emergency care to a casualty suffering from nerve agent poisoning. In this lesson, you will learn to determine whether the nerve agent casualty needs additional atropine and, if needed, to administer additional injections of atropine. You will also learn to provide aid to victims of other chemical agents, that is, blister agents, blood agents, and choking agents.

OBJECTIVE

TASK

Identify signs and symptoms of chemical agent poisonings and their treatments.

CONDITIONS

Given written items pertaining to the identification and treatment of chemical agent casualties.

STANDARD

Score 70 or more points on the 100-point written examination.

EXPLANATION

NOTE TO INSTRUCTOR: Discuss the signs and symptoms of each type of chemical agent. Use an assistant instructor as the simulated casualty to demonstrate administering atropine to a nerve agent casualty and flushing blister agent from the eyes of a casualty. Explain the steps as you demonstrate on the simulated casualty. Make sure each student can see the demonstration. Describe other treatment procedures given in the lesson.

22-2. IDENTIFY SIGNS AND SYMPTOMS OF SEVERE NERVE AGENT POISONING

Signs of mild nerve agent poisoning such as a runny nose, drooling, tightness in the chest, cramps, and nausea.

Strange and confused behavior.

Wheezing, coughing, and gurgling sounds while breathing,

Severely pinpointed pupils.

Red eyes with tears present.

Vomiting.

Severe muscular twitching (spasms).

Loss of bladder and bowel control.

Convulsion.

Unconsciousness.

Respiratory arrest (not breathing).

22-3. TREAT A CASUALTY WITH SEVERE NERVE AGENT POISONING

Remind students that they are to provide care to casualties only after they have masked, put on their own protective clothing, and decontaminated their exposed skin (if needed).

a. Mask the Casualty

Tell the students you have already masked the casualty.

NOTE TO INSTRUCTOR: If desired, the procedures for masking, administering three Mark I kits, CANA, and decontaminating the casualty may be demonstrated and explained at this time. Tell the students they have administered three Mark I kits and CANA (convulsant antidote for nerve agent) (Figure 22-2) in his thigh (or buttocks if applicable), and decontaminated his skin. Have the assistant instructor lie on his side, in the swimmer position, with his mask and hood in place.

ASK: How long do I wait after administering the three Mark I kits and CANA?

Response: No time limit.

ASK: Why am I squatting instead of kneeling?

Response: If you kneel, the chemical agents on the ground will reduce your protective clothing's ability to protect you.

b. Administer Additional Atropine, If Needed

You have five atropine autoinjectors in your aid bag. These atropine autoinjectors are used if the three Mark I kits administered to the casualty are not sufficient to control the casualty's symptoms. No additional 2-PAM chloride is administered. A casualty who has received sufficient atropine should have a decrease in the amount of secretions and be breathing more easily. If the casualty is still experiencing a large amount of secretion or difficulty breathing administer more atropine.

NOTE TO INSTRUCTOR: Use an atropine autoinjector trainer for the demonstration. If transparencies are used, show Figure 22-1. If possible, show how an actual autoinjector is armed and how it functions.

Remove an atropine autoinjector from your aid bag, tear the clear plastic protective bag, and remove the autoinjector.

Grasp the body of the autoinjector with the thumb and first two fingers of your dominant hand. As you would a pen or pencil.

Grasp the yellow safety cap with your other hand.

Pull the yellow safety cap away from the body of the autoinjector.

Holding the autoinjector with the thumb and first two fingers (As you would a pen or pencil.) place the green end of the autoinjector against and at a 90^{o} angle to the injection site. [Normally, the injection site is on the outer thigh below the hip and above the knee. If the casualty is very thin, the upper, outer quadrant of his buttocks is used as the injection site.] The casualty is in the swimmer position, on his side.

Apply firm, even pressure to make the autoinjector function.

ASK: How long do I leave the needle in the muscle?

Response: At least 10 seconds.

Remove injector from casualty. Temporarily place the used injectors on the casualty's side. When all necessary injections are given attach injectors to the casualty's outer clothing pocket flap.

ASK: What should I do with the used injector?

Response: Attach the used autoinjector to the casualty's outer clothing (pocket flap) to inform medical personnel what medication the casualty received and how much he received.

ASK: How long should I wait between injections, assuming that the soldier require addition injections?

Response: No time limit.

c. Administer Additional CANA

Administer a second CANA if the casualty is still suffering convulsions 5 to 10 minutes after administering the first CANA. If the casualty still has convulsions 5 to 10 minutes later administer a third CANA.

ASK: What is the maximum number of CANA autoinjectors you should administer to a casualty.

Response: Three.

22-4. IDENTIFY SIGNS AND SYMPTOMS OF EXPOSURE TO BLISTER AGENTS

Blister agents act primarily on the eyes, respiratory tract, and skin. The eyes are very sensitive and are usually the first to be affected by blister agents. Signs and symptoms affecting the skin and respiratory track may not appear for several hours following exposure.

a. Eyes

Sensitivity to light.

Gritty feeling in eyes.

Inflammation of the inner eyelids.

Swelling and spasms of the eyelids.

Watery eyes.

Pain.

b. Skin

Itching.

Swelling and redness.

Blisters.

Pain. (If lewisite or phosgene oxide, pain is immediate and intense.)

c. Respiratory Tract

Signs and symptoms of respiratory tract exposure to blister agents usually appear 4 to 6 hours after exposure. However, they may not appear for 24 to 48 hours following exposure

Throat irritation (dry, burning sensation).

Harsh cough and hoarse voice.

Phlegm (mucous discharge) or frothy sputum.

Runny nose and frequent sneezing.

d. Other

Headache.

Nausea and vomiting.

Diarrhea.

22-5. TREAT A CASUALTY EXPOSED TO A BLISTER AGENT

a. Mask the Casualty

If the casualty is not masked put his protective mask on him. Remember to squat, not kneel

b. Irrigate the Casualty's Eyes, If Needed

Quickly flush the casualty's eye if liquid blister agent is present in the eye. If agent is present in both eyes, flush both eyes.

NOTE TO INSTRUCTOR: Demonstrate irrigating a casualty's eyes using a masked assistant instructor as the casualty. You may simulate flushing the eye using an empty canteen or actually flush the affected eye.

Remove and open the casualty's canteen.

Have the casualty take a deep breath and hold it.

Lift the casualty's mask from his chin so his eyes are exposed.

Tilt the casualty's head to one side so the eye to be flushed is lower than the other eye.

Have the casualty open his lower eye.

Pour the water from the canteen gently into the lower eye, pouring from the inner edge of the eye to the outer edge.

Continue to flush the eye with water until the blister agent has been flushed from the eye.

If both eyes are contaminated, tilt the casualty's head so the other eye is now lower than the flushed eye and flush the second eye in the same manner.

Replace the casualty's mask. Have him clear his mask resume normal breathing.

ASK: What should you do once you have removed any liquid blister agent from the casualty's eyes?

Response: Decontaminate the casualty's face and exposed skin, then evacuate the casualty as soon as practical.

ASK: Assume blisters have formed on the casualty's unprotected forearms. Should I decontaminate the blisters?

Response: Do not decontaminate or break the blistered areas.

Washing eyes may not result in symptoms going away. Do not reflush.

c. Decontaminate Face, Mask, and Exposed Skin

Have the casualty decontaminate his face, mask, and exposed skin with his M291 decontamination kit if he is able. If he is not able, have another soldier perform the decontamination procedures for him. The key to successful decontamination is immediate action upon finding the contamination.

If blisters have already formed, do not attempt to decontaminate the blistered areas. The blisters are actually burns. A casualty with blisters over a wide area of his body is considered to be seriously burned.

d. Evacuate the Casualty

Evacuate the casualty to the nearest medical treatment facility. If the casualty cannot be evacuated immediately, have the casualty checked by the medic as soon as practical.

22-6. IDENTIFY SIGNS AND SYMPTOMS OF EXPOSURE TO CHOKING AGENTS

Choking agents are chemical agents that attack the lungs and cause them to fill with fluid. Early signs and symptoms will subside rapidly and allow the casualty to carry on with his combat mission if needed. If the casualty was exposed to a sufficient amount of choking agent, late signs and symptoms usually appear 4 to 24 hours after initial exposure.

a. Early Signs and Symptoms of Exposure to Choking Agents

Tears.

Dry throat.

Tightness in the chest.

Choking cough.

Nausea or vomiting.

Headache.

b. Late Signs and Symptoms of Exposure to Choking Agents

Anxiety.

Wheezing.

Rapid, shallow breathing.

Weak, but rapid, pulse (tachycardia).

Serious attacks of coughing that produce white or yellowish fluid, sometimes frothy and tinted with blood.

Cyanosis (bluish tint to lips and nailbeds).

Shock.

Respiratory arrest.

22-7. TREAT A CASUALTY EXPOSED TO CHOKING AGENTS

a. Mask the Casualty

If the casualty is not masked put his protective mask on him. Remember to squat, not kneel

b. Treat Early Signs and Symptoms

Instruct a casualty with early signs and symptoms of choking agent poisoning to sit until the signs and symptoms have subsided if the military situation permits. Have the casualty evaluated by medical personnel when possible.

c. Treat Late Signes and Symptoms

If a casualty shows late signs and symptoms, have him rest in a sitting position and keep him warm. Evacuate him as soon as possible.

22-8. IDENTIFY SIGNS AND SYMPTOMS OF BLOOD AGENT POISONING

Blood agents interfere with the body's ability to use oxygen. They may also attack the lungs like choking agents. Signs and symptoms of choking agent poisoning include:

Dizziness and headache.

Cherry-red skin.

Irritation of the eyes, nose, and throat.

Nausea and vomiting.

Slow pulse (bradycardia).

Fast and deep breathing in the initial phase, followed by shallow breathing and faintness due to a decrease of usable oxygen.

Convulsions.

Respiratory arrest.

Cardiac arrest.

22-9.TREAT A CASUALTY WITH BLOOD AGENT POISONING

a. Mask the casualty.

If the casualty is not masked put his protective mask on him. Remember to squat, not kneel.

b. Get Medical Help/Evacuate the Casualty

Evacuate the casualty to the nearest medical treatment facility as quickly as possible.

22-10. CLOSING

Chemical agents are deadly. Immediate treatment can help chemical agent casualties to survive until they can be evacuated to a medical treatment facility where they can receive medical treatment. Remember to take adequate protective measures yourself before helping a casualty who has been overcome by chemical agents.

This lesson is tested in the written multiple-choice examination.

Ask for questions or comments.

Return to Table of Contents

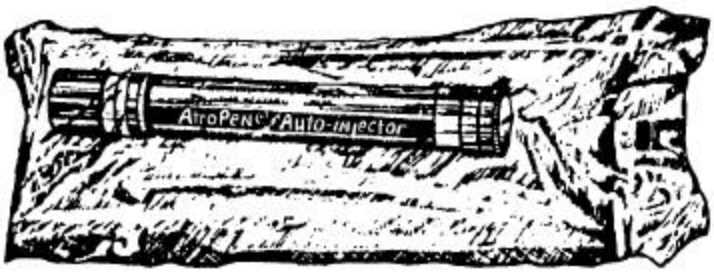

FIGURE 22-1. ATROPINE AUTOINJECTOR

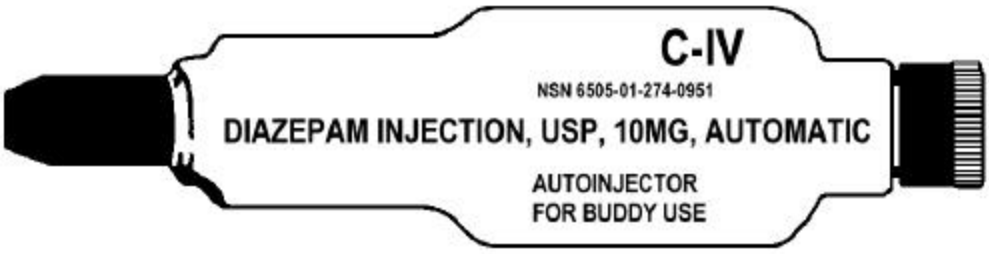

FIGURE 22-2. CANA

IS0825, COMBAT LIFESAVER: MEDICAL TASKS

Lesson 23: MANAGE A CASUALTY WITH COMBAT STRESS REACTION (BATTLE FATIGUE).

Equipment and Supplies Needed:

None.

Personnel Needed:

Instructor (PA, 91W 20/30, 91F, 91G, or other person trained in handling casualties with combat stress/battle fatigue).

Assistant Instructor(s) (91W etc.), as needed.

References:

FM 8-51, Combat Stress Control in a Theater of Operations, Tactics, Techniques, and Procedures.
FM 21-11, First Aid for Soldiers.
FM 22-51, Leader's Manual for Combat Stress Control.

23-1. INTRODUCTION

Not all casualties have bleeding wounds, broken bones, or chemical agent poisoning. Some casualties suffer psychological injuries commonly referred to as combat stress reaction but since World War II it has also been called battle fatigue. Most combat stress casualties can be treated without evacuating them out of the combat zone. Sometimes the treatment is simply making sure the soldier gets a good night's rest, warm food, and a change of clothing.

Combat stress can be mild to severe. Mild cases do not seriously interfere with the soldier's effectiveness. If the combat stress is moderate to severe, the soldier is ineffective and usually requires evacuation. Moderate and severe combat stress reactions are sometimes referred to as "more serious" combat stress.

OBJECTIVE

TASK:

Identify characteristics of combat stress reaction and its treatment.

CONDITIONS:

Given written items pertaining to the identification and treatment of combat stress reaction.

STANDARD:

Score 70 or more points on the 100-point written examination.

EXPLANATION

NOTE TO INSTRUCTOR: Discuss the causes, signs and symptoms, and treatment of combat stress. If you wish, have an assistant instructor demonstrate some of the signs and symptoms of combat stress. You can also demonstrate procedures for approaching and calming a combat stress casualty. Explain the procedures as you demonstrate.

23-2. IDENTIFY THE CAUSES OF COMBAT STRESS

Some of the problems which contribute to the development of combat stress are:

Physical exhaustion.

Constant alertness.

Loss of sleep.

NOTE TO INSTRUCTOR: Explain to the students that the above three causes are primarily the responsibility of the chain of command.

Trauma of seeing fellow soldiers wounded or killed.

Fear of being killed or maimed.

Fear of killing other people.

Fear of failure or disgrace.

Worry about family problems back home.

23-3. IDENTIFY THE SIGNS AND SYMPTOMS OF MILD COMBAT STRESS REACTION

a. Physical Signs and Symptoms

Tenseness, jumpy, startled at sudden sounds or movement.

Headache, backache, pain in old wounds.

Fidgeting, fine trembling of the hands, fumbling.

Cold sweat, dry mouth, pale skin.

Blurred vision.

Pounding heart, feeling dizzy or light-headed.

Feeling "out of breath," breathing too rapidly.

Tingling, cramps, or numbness in fingers and toes.

Upset stomach, "dry heaves," or actual vomiting.

Uncontrollable emptying of bowels and bladder when danger suddenly appears.

Fatigue, feeling drained of energy.

Blank, haunted, "1000-yard" stare.

b. Mental and Emotional Signs and Symptoms

Anxiety, worrying, bothered by little things.

Irritability, complaining.

Difficulty in paying attention or remembering details.

Difficulty in thinking, speaking, and communicating.

Sleeping difficulties, such as being awakened by bad dreams.

Grieving, tearfulness, crying for a dead or wounded buddy.
Feeling guilty about mistakes made or at things that had to be done.

Anger, resentment.

Feeling let down others, loss of confidence in self and/or others.

23-4. TREAT A CASUALTY WITH MILD COMBAT STRESS REACTION

Be calm.

Keep the soldier focused on the unit's immediate mission.

Encourage the soldier to eat, bathe, and sleep as the tactical mission and safety permit.

Keep the soldier busy when he is not resting.

Get the soldier to perform simple, well-learned tasks.

Have the soldier use relaxation techniques (take a deep breath and let it out slowly, etc.).

Allow and encourage the soldier to ventilate his feelings.

Remind the soldier that some degree of combat stress reaction is normal and to be expected.

23-5. IDENTIFY THE SIGNS AND SYMPTOMS OF MODERATE/SEVERE COMBAT STRESS REACTION

a. Physical Signs and Symptoms

Cannot keep still, constantly moving around.

Arms or whole body shake.

Cowering in terror.

Flinching or ducking at almost any sudden sound or movement.

Sudden paralysis (hand, arm, leg) with no injury.

Sudden blindness or deafness (partial or complete) with no injury.

Total immobility (freezing) under fire.

Total physical exhaustion (just stands or sits).

Staggering or swaying when standing.

b. Mental and Emotional Signs and Symptoms

Rapid talking, constantly making suggestions.

Starting fights, recklessness, "vicious" behavior within own group, uncontrollable anger.

Social withdrawal (silence, sulking, prolonged sadness).

Inattentiveness to self-care and hygiene, no interest in eating.

Apathetic and indifferent to danger.

Cannot remember orders, how to perform duties, or where he is.

Inability to concentrate or make decisions.

Severe speech problems, including stuttering and inability to talk.

Fear of sleeping, even in a relatively safe area.

Sees things that are not there (usually after severe sleep loss).

Rapid emotional swings, hysteria, strange behavior.

Panic running under fire.

23-6. TREAT A CASUALTY WITH MODERATE/SEVERE COMBAT STRESS REACTION

A soldier suffering from moderate or severe combat stress reaction usually requires routine evacuation. Combat stress reaction patients should be managed separately from other patients. Combat stress reaction casualties usually recover completely after resting in a safe area, being able to clean up, and receiving hot, nutritious meals. About 70 to 85 percent of evacuated combat stress reaction casualties are capable (with good management) of returning to their combat units within three days. Early on, these patients need to talk, ventilate to any medical person. All combat stress reaction patients should be treated with the expectation of their going back to duty. Most of the remainder will return to their own unit or to another unit within two weeks.

Appear to be calm and in control of the situation.

Calmly try to talk the casualty into cooperating if he is responsive.

If the soldier appears to be dangerous, take his weapon away from him.

Physically restrain the casualty if the soldier is a danger to himself or others.

Get medical assistance if possible.

Evacuate the casualty if he does not improve or if he is dangerous. Restrain the casualty if needed.

ASK: What are some of the things done to help mild and more serious combat stress casualties recover?

Response: Normal activities such as sleeping, eating, and getting cleaned up which the soldier has been denied due to combat conditions.

ASK: About how many combat stress casualties that are evacuated return to the unit within three days?

Response: 70 to 85 percent.

23-7. CLOSING

Procedures used to treat mild combat stress reaction casualties can also be used to prevent combat stress from developing.

When a combat stress reaction casualty returns to the unit, welcome him back. Be willing to talk about what happened and express your confidence in him. Make him feel part of the unit again. Remember that no one is immune to combat stress reaction.

This lesson is tested in the written multiple-choice examination.

Ask for questions or comments.

Return to Table of Contents

IS0825, COMBAT LIFESAVER: MEDICAL TASKS

Lesson 24: ADMINISTER ACETAMINOPHEN AND PSEUDOEPHEDRINE HYDROCHLORIDE TABLETS

Equipment and Supplies Needed:

Acetaminophen tablets, 325mg per tablet, 2 bottles (50 tablets) [NSN 6505 01 171 1625].

Pseudoephedrine hydrochloride tablets, 30mg per tablet, 1 bottle (24 tablets) [NSN 6505 00 149 0098].

Personnel Needed:

Instructor (PA, 91W 20/30, or other person experienced in administering oral medication).

References:

Physicians' Desk Reference for Nonprescription Drugs.

24-1.INTRODUCTION

A soldier can have minor medical conditions such as minor aches and pains, common cold, headache, or allergies that would normally be treated with medication available without a prescription. On a battlefield, these "common" drugs may not be easily obtained. The combat lifesaver aid bag contains a supply of acetaminophen (Tylenol®) and pseudoephedrine hydrochloride (Sudafed®) tablets that can be administered to soldiers until they can obtain their own medication at sick call.

OBJECTIVE

TASK:

Identify when acetaminophen and pseudoephedrine hydrochloride tablets should and should not be given, the appropriate dosage, and the effects of an overdose.

CONDITIONS:

Given multiple-choice items pertaining to administering acetaminophen tablets and pseudoephedrine hydrochloride tablets.

STANDARD:

Score 70 or more points on the 100-point written examination.

EXPLANATION

NOTE TO INSTRUCTOR: Discuss the proper uses of acetaminophen tablets and pseudoephedrine hydrochloride tablets, their proper doses, situations which indicate they should not be used, and signs and symptoms of overdose.

24-2. IDENTIFY WHEN ACETAMINOPHEN SHOULD AND SHOULD NOT BE ADMINISTERED

a. Uses of Acetaminophen Tablets

Use acetaminophen (Tylenol ®) to treat problems such as:

Simple headache.

Muscular aches and pains.

Bursitis.

Neuralgia.

Sprains.

Overexertion.

Menstrual discomforts.

Fever.

Arthritis.

Rheumatism.

Ulcer.

Gastritis.

Hiatus hernia.

c. Contraindications

Acetaminophen should not be administered to a person with an allergy (sensitivity) to it, and, if the allergy appears, the drug should be discontinued.

Acetaminophen should not be administered to a pregnant woman or one nursing a baby without the advice of a health professional.

Excessive acetaminophen can be dangerous.

24-3. ADMINISTER ACETAMINOPHEN

Normal adult dosage:

One or two tablets three or four times daily.

Up to 8 tablets in a 24-hour period.

Discontinue medication if casualty shows signs of overdose.

24-4. RECOGNIZE AND TREAT ACETAMINOPHEN OVERDOSE

A soldier may carry his own supply of, say, Tylenol ® and accidentally take too many tablets.

a. Signs and Symptoms of Acetaminophen Overdose

Nausea.

Vomiting.

Profuse perspiration.

General malaise.

b. Treatment for Acetaminophen Overdose

Have the casualty vomit, if conscious and there is a method to induce vomiting. If the casualty is unconscious protect the airway and do not induce vomiting.

Evacuate the casualty to a medical treatment facility.

24-5. IDENTIFY WHEN PSEUDOEPHEDRINE HYDROCHLORIDE TABLETS SHOULD AND SHOULD NOT BE ADMINISTERED

a. Uses of Pseudoephedrine Hydrochloride Tablets

Pseudoephedrine hydrochloride tablets (Sudafed®) is used to temporarily relieve the signs and symptoms of the common cold (such as nasal congestion).

b. Contraindications

Pseudoephedrine hydrochloride tablets should not be administered if the person:

Is allergic to any of the ingredients in the tablet.

Has a high fever.

Pseudoephedrine hydrochloride tablets should not be administered to people with the following conditions unless a physician has approved the medication:

Heart problems.

Vascular disease.

Diabetes.

Thyroid disease.

Hypertension (high blood pressure).

Pregnancy.

Nursing a baby.

Enlarged prostate gland.

Taking a hypertensive drug.

Taking an antidepressant drug.

24-6. ADMINISTER PSEUDOEPHEDRINE HYDROCHLORIDE TABLETS

NOTE TO INSTRUCTOR: Dosage instructions are only for the tablets in the combat lifesaver aid bag. Instructions for administering other antihistamine tablets may differ.

Normal adult dosage for pseudoephedrine hydrochloride tablets:

Two tablets every 4 to 6 hours as needed.

No more than 8 tablets in a 24-hour period.

24-7. RECOGNIZE AND TREAT PSEUDOEPHEDRINE HYDROCHLORIDE OVERDOSE

Discontinue if signs or symptoms of overdose appear, including:

Dizziness.

Nervousness.

Sleeplessness.

High fever.

ASK: What should you do if signs of pseudoephedrine hydrochloride overdose develop?

Response: Evacuate the casualty.

ASK: What should you do if the acetaminophen and pseudoephedrine hydrochloride tablets do not control the casualty's signs and symptoms?

Response: Have the casualty checked by a medic or report to sick call.

24-8. CLOSING

Even though acetaminophen and pseudoephedrine hydrochloride tablets are not prescription drugs, they can still be dangerous. Make sure the medication will help rather than harm the soldier before you give the medication to the soldier. Soldiers who are ill

should go to sick call whenever possible. The soldier's condition may be more serious than it first appears.

This lesson is tested in the written multiple-choice examination.

Ask for questions or comments.

Return to Table of Contents

IS0825, COMBAT LIFESAVER: MEDICAL TASKS

Lesson 24: TRANSPORT A CASUALTY USING A MILITARY VEHICLE

Equipment and Supplies Needed:

Standard litters with litter straps (if student practice is used).

Military vehicles or simulated vehicles (if student practice is used).

Straps to secure casualties to litters and litters to vehicles (if student practice is used).

Overhead projector (if figures are converted to transparencies and shown).

Personnel Needed:

Instructor (PA, 91W 20/30, or other person experienced in evacuating litter casualties).

Assistant instructor(s) (91W etc.), as needed.

References:

FM 8-10-6, Medical Evacuation in a Theater of Operations: Tactics, Techniques, and Procedures.
FM 8-35, Evacuation of the Sick and Wounded.

24-1. INTRODUCTION

When possible, military vehicles are used to evacuate casualties. The vehicle may be a helicopter modified to be an air ambulance or a ground vehicle modified to be a ground ambulance. If these are not available, other military vehicles can be used to carry casualties. As a combat lifesaver, you may need to use tactical military vehicles to transport casualties or assist medical personnel in loading and unloading air and ground ambulances.

OBJECTIVE

TASK:

Identify procedures for moving casualties by litter and loading and unloading casualties using military vehicles.

CONDITIONS:

Given multiple-choice items pertaining to evacuation.

STANDARD:

Score 70 or more points on the 100-point written examination.

EXPLANATION

NOTE TO INSTRUCTOR: Demonstrate opening a standard litter and securing a casualty to the litter. If possible, demonstrate the litter carries described in this lesson, loading casualties into air and ground ambulances, unloading casualties from air and ground ambulances, preparing tactical ground vehicles for transporting litter casualties, and loading casualties into and unloading casualties from tactical ground vehicles. Explain the procedures as you demonstrate. If the carries and/or vehicles are not used in demonstrations, use illustrations.

24-2. DETERMINE THE ORDER IN WHICH CASUALTIES ARE TO BE EVACUATED

a. First Priority

Casualties with conditions that could affect life, limb or eyesight should be evacuated first if possible

Casualties with serious respiratory problems.

Casualties with severe blood loss.

Casualties with second and third degree burns of the face, neck, or perineum.

Casualties with closed head injuries, with decreasing mental status.

Casualties with poor blood circulation in a limb or with no detectable circulation in a limb.

b. Second Priority

Casualties with chest wounds.

Casualties with abdominal wounds.

Casualties with extensive, serious eye injury.

Casualties with fractures.

Casualties with serious second and third degree burns not involving the face, neck, or perineum.

c. Third Priority

Casualties with injuries which have been stabilized and do not threaten the casualty with loss of life or limb.

Casualties with injuries so severe that only extensive and complicated medical treatment can prolong their life.

NOTE TO INSTRUCTOR: Stress that the third category is used only when evacuation resources are limited.

24-3. MOVE A CASUALTY USING A FOUR-MAN LITTER SQUAD

a. Preparing the Litter

Open a standard litter.

Lock the spreader bars at each end of the litter with your foot.

b. Preparing the Casualty

Place casualty onto litter using the modified two-man arms carry or the modified two-man fore-and-aft carry.

Secure the casualty to the litter with litter straps.

c. Preparing the Four-Man Litter Squad

NOTE TO INSTRUCTOR: If transparencies are used, show Figure 24-1.

Position one squad member at each litter handle with the litter squad leader at the casualty's right shoulder.

ASK: Why should the leader be in this position?

Response: It is the best position for monitoring the casualty's condition.

If the casualty does not have a fractured leg:

Carry feet first when traveling on level ground or going down.

Carry head first when going up a hill or up stairs.

If the casualty has a fractured leg:

Carry headfirst when traveling on level ground or going down.

Carry feet first going up a hill or stairs.

ASK: Why would you change the procedures for a casualty with a fractured leg?

Response: To keep the weight of the casualty's body from pressing on the fracture.

d. Lifting the Litter

On the preparatory command, "Prepare to lift," the four bearers kneel beside and grasp litter handles.

On the command of execution, "LIFT," all bearers rise together.

On the command, "Four-man carry, MOVE," all bearers walk forward in unison.

e. Uphill Carry

Used to go up a hill or stairs.

NOTE TO INSTRUCTOR: If transparencies are used, show Figure 24-2 (A).

f. Downhill Carry

Used to go down a hill or stairs.

NOTE TO INSTRUCTOR: If transparencies are used, show Figure 24-2 (B).

g. Litter Post Carry

Used to keep the litter level in rough terrain.

NOTE TO INSTRUCTOR: If transparencies are used, show Figure 24-3 (A).

h. Litter Rotation

NOTE TO INSTRUCTOR: If transparencies are used, show Figure 24-3 (B).

To change direction of movement, such as from feet first to head first, begin in a litter post carry position. The front and back bearers release the litter and the middle bearers rotate the litter and themselves.

24-4. LOAD CASUALTIES INTO GROUND AMBULANCES

a. General Rules for Using Ground Ambulances

Ground ambulances have medical specialists to take care of the casualties during evacuation. Follow any special instructions for loading, securing, or unloading casualties.

Make sure each litter casualty is secured to his litter. Use litter straps when available.

Load the most seriously injured casualty last.

Load a casualty headfirst (head in the direction of travel) rather than feet first.

Make sure each litter is secured to the vehicle.

Unload casualties in the reverse order in which they are loaded.

ASK: When is the most seriously injured litter casualty unloaded?

Response: First.

b. M1010 1 1/4-Ton Truck Ambulance

NOTE TO INSTRUCTOR: If transparencies are used, show Figure 24-4.

Designed to carry:

4 litter casualties, or

8 ambulatory casualties, or

2 litter casualties and 4 ambulatory casualties (mixed load).

Sequence for loading 4 litter casualties:

Upper right berth.

Lower right berth.

Upper left berth.

Lower left berth.

Sequence for loading a mixed load:

Upper right berth.
Lower right berth.

Ambulatory casualties on left side.

c. M996 Armored Ambulance (HMMWV)

NOTE TO INSTRUCTOR: If transparencies are used, show Figure 24-5.

Designed to carry:

2 litter casualties, or

6 ambulatory casualties, or

1 litter casualty and 3 ambulatory casualties (mixed load).

Sequence for loading 2 litter casualties:

Right berth.

Left berth.

d. M997 Armored Ambulance (HMMWV)

NOTE TO INSTRUCTOR: If transparencies are used, show Figure 24-6.

Designed to carry:

4 litter casualties, or

8 ambulatory casualties, or

2 litter casualties and 4 ambulatory casualties (mixed load).

Sequence for loading 4 litter casualties:

Upper right berth.

Lower right berth.

Upper left berth.

Lower left berth.

Sequence for loading 2 litter casualties:

Upper right berth.

Lower right berth.

Ambulatory casualties on left side.

e. M113 Full-Tracked Armored Personnel Carrier

NOTE TO INSTRUCTOR: If transparencies are used, show Figure 24-7.

An M113 armored personnel carrier is transformed into an ambulance by removing the spall liner and installing the litter suspension kit.

Designed to carry:

4 litter casualties, or

10 ambulatory casualties, or

2 litter casualties and 5 ambulatory casualties (mixed load).

Sequence for loading 4 litter casualties:

Upper right berth.

Lower right berth.

Upper left berth.

Lower left berth (most seriously injured casualty).

24-5. LOAD CASUALTIES INTO AIR AMBULANCES

Casualties may be evacuated by helicopter, especially if the distance to be traveled is great and the location hard to reach.

a. General Rules for Using Air Ambulances

Air ambulances have medical specialists to take care of the casualties during evacuation. Follow any special instructions for loading, securing, or unloading casualties.

Remain 50 yards from the helicopter until the litter squad is signaled to approach the aircraft.

Approach the aircraft from the front so the litter squad is in full view of the pilot. Keep a low silhouette when approaching the aircraft.

Approach and leave the aircraft quickly, but do not run.

Avoid the area near the rear rotor of the Blackhawk and Iroquois air ambulance helicopters. If you must go from one side of the helicopter to the other, go around the front of the helicopter. Never go around the rear of the helicopter and always go from the downhill side.

Take orders from the combat medic or loadmaster on the aircraft.

Load the most seriously injured casualty last.

Load the casualty that will occupy the upper berth first; then load the next litter casualty immediately under the first casualty. This is done to keep a casualty from accidentally falling on another casualty should his litter drop before it is secured.

When casualties are placed lengthwise, position them with their heads toward the direction of travel.

Make sure each litter casualty is secured to his litter.

Make sure each litter is secured to the aircraft.

Unload casualties in the reverse order in which they are loaded, unloading the most seriously injured casualty first.

b. UH-60A Blackhawk Air Ambulance

NOTE TO INSTRUCTOR: If transparencies are used, show Figure 24-8.

The Blackhawk is the primary air ambulance used in combat. There are two methods of configuring a Blackhawk helicopter to serve as an air ambulance.

Normal configuration is designed to carry:

4 litter casualties and one ambulatory casualty, or

7 ambulatory casualties, or

2 litter casualties and 4 ambulatory casualties (mixed load).

Other configuration is designed to carry:

6 litter casualties and one ambulatory casualty, or

7 ambulatory casualties, or

3 litter casualties and 4 ambulatory casualties (mixed load).

Litter casualties can be loaded on both sides of the helicopter (top to bottom) simultaneously.

c. UH-1H/V Iroquois Air Ambulance

NOTE TO INSTRUCTOR: If transparencies are used, show Figure 24-9.

Designed to carry:

6 litter casualties, or

9 ambulatory casualties, or

3 litter casualties and 4 ambulatory casualties (mixed load).

NOTE TO INSTRUCTOR: If transparencies are used, show Figure 24-10.

Loading 6 litter casualties:

Load the casualties lengthwise (heads forward toward the direction of travel) with three casualties on each side.

Litter casualties can be loaded on both sides of the helicopter (top to bottom) simultaneously.

NOTE TO INSTRUCTOR: If transparencies are used, show Figure 24-11.

Loading a mixed load:

Load three casualties crosswise (top to bottom) across the back of the compartment.

Seat the ambulatory casualties seated in the forward part of the compartment (two on the right side and two on the left side).

d. CH-47 Chinook Air Ambulance

NOTE TO INSTRUCTOR: If transparencies are used, show Figure 24-12.

The CH-47 Chinook air ambulance is a dual rotary-wing aircraft.

Designed to carry:

Up to 24 litter casualties, or

31 ambulatory casualties, or

Several combinations of mixed loads.

Litter racks are filled from front to back and from top to bottom. Any ambulatory casualties are usually seated in the front of the compartment.

24-6. LOAD CASUALTIES ON GROUND MILITARY VEHICLES

Nonmedical military vehicles can be used to evacuate casualties when no medical evacuation vehicles are available.

a. General Rules for Using Tactical Ground Vehicles

If medical personnel are present, follow their instructions for loading, securing, and unloading casualties.

When loading casualties into a vehicle, the most seriously injured casualty is usually loaded last.

When a casualty is placed lengthwise, load him with his head pointing forward toward the direction of travel.

Make sure each litter casualty is secured to his litter. Use litter straps, if available.

Secure each litter to the vehicle as it is loaded into place. Make sure all litters are secured.

Unload casualties in the reverse order in which they are loaded, with the most seriously injured casualty being unloaded first.

b. M998 Truck, Cargo/Troop Carrier 1¼ Ton, 4x4 (Four-Man Configuration

NOTE TO INSTRUCTOR: If transparencies are used, show Figure 24-13.

The 1 ¼ ton cargo truck, four-man configuration can be easily adapted to transporting three litters. To convert this vehicle for carrying casualties, follow the procedures listed below.

Remove the cargo cover and metal bows. Secure them in place. Lower the tailgate.

Place two litters side-by-side across the back of the truck with the litter handles resting on the sides of the truck.

NOTE: When the route of evacuation is along narrow roads or trails, care must be taken to prevent the litter handles from catching on trees or bushes.

Secure the litters to the vehicle.

Place one litter lengthwise, headfirst, in the bed of the truck. Secure it in place.

Leave tailgate open. It is supported by the two tailgate chain hooks.

c. M880, M890, or M1008 1 1/4-Ton Cargo Truck

NOTE TO INSTRUCTOR: If transparencies are used, show Figure 24-14.

M880, M890, and M1008, 4x4 or 4x2, 1 1/4-ton cargo trucks are lightweight vehicles used to transport personnel or light cargo. They can be adapted to evacuate up to five litter casualties.

To prepare the vehicle for evacuating litter casualties:

Fold the fabric cover and metal bows forward (toward the truck cab) as an assembly and secure the assembly to the front bow.

Lower the tailgate.

Lower the seats and lock them in place.

To load 5 litter casualties:

Load the first litter crosswise across the sideboards close to the truck cab, usually with the casualty's head behind the driver's seat.

Load the second litter crosswise across the sideboards next to the first litter, usually with the casualty's head behind the passenger's seat (loaded alternately head to foot).

Load the third litter crosswise across the sideboards next to the second litter, usually with the casualty's head behind the driver's seat.

Load the fourth litter head first (toward the cab) on the right side of the bed of the truck. Use the litter stirrups.

Load the fifth litter head first on the left side of the bed of the truck. Use the litter stirrups to keep the litter off the floor.

Raise and fasten the tailgate to secure the lower litters.

d. 2 1/2-Ton or 5-Ton Wide Bed Cargo Truck

NOTE TO INSTRUCTOR: If transparencies are used, show Figure 24-15.

The 2 ½ ton or the 5-ton, 6x6, cargo truck can be used to transport up to 12 litter casualties.

To prepare the truck for evacuating litter casualties:

Roll the canvas top forward toward the truck cab and secure it to the front bow.

Lower the tailgate.

Lower the seats and lock them in place.

Load litter casualties in the following manner:

Load the first group of three litters crosswise across the seats in the front half (near the cab) of the truck with the litter handles resting on the seats. The casualties are usually placed head to foot (head of first casualty behind driver's side, head of second casualty behind passenger's side, and head of third casualty behind driver's side).

Load the second group of three litters lengthwise on the floor in the front half (near the cab) of the truck beneath the first group of litters. Load the casualties headfirst (head toward the cab). Use the stirrups to keep the litters off the floor.

Load the third group of three litters crosswise across the seats in the rear half of the truck with the litter handles resting on the seats. Continue to alternate casualties (head of seventh casualty behind passenger's side, head of eighth casualty behind driver's side, and head of ninth casualty behind driver's side).

Load the fourth group of three litters lengthwise on the floor in the rear half of the truck beneath the third group of litters. Load the casualties with their heads toward the cab. Use the stirrups to keep the litters off the floor.

Raise and secure the tailgate as high as possible to help secure the litters in place.

24-7. CLOSING

As a combat lifesaver, you will probably be asked to assist the combat medic in evacuating wounded personnel when your combat duties allow. If no combat medic is available, you may need to instruct other soldiers in the procedures for evacuating litter casualties.

This lesson is tested in the written multiple-choice examination.

Ask for questions or comments.

STUDENT PRACTICE

If time permits and standard litters are available, have students practice the litter carries.

If time permits and standard litters and one or more ground ambulances are available, have students practice loading and unloading litter casualties.

If time permits and one or more nonmedical military vehicles which can be used to transport litter casualties are available, have students practice preparing the vehicles to transport litter casualties, loading litter casualties, and unloading litter casualties.

If time permits and standard litters and one or more air ambulances are available, have students practice loading and unloading litter casualties.

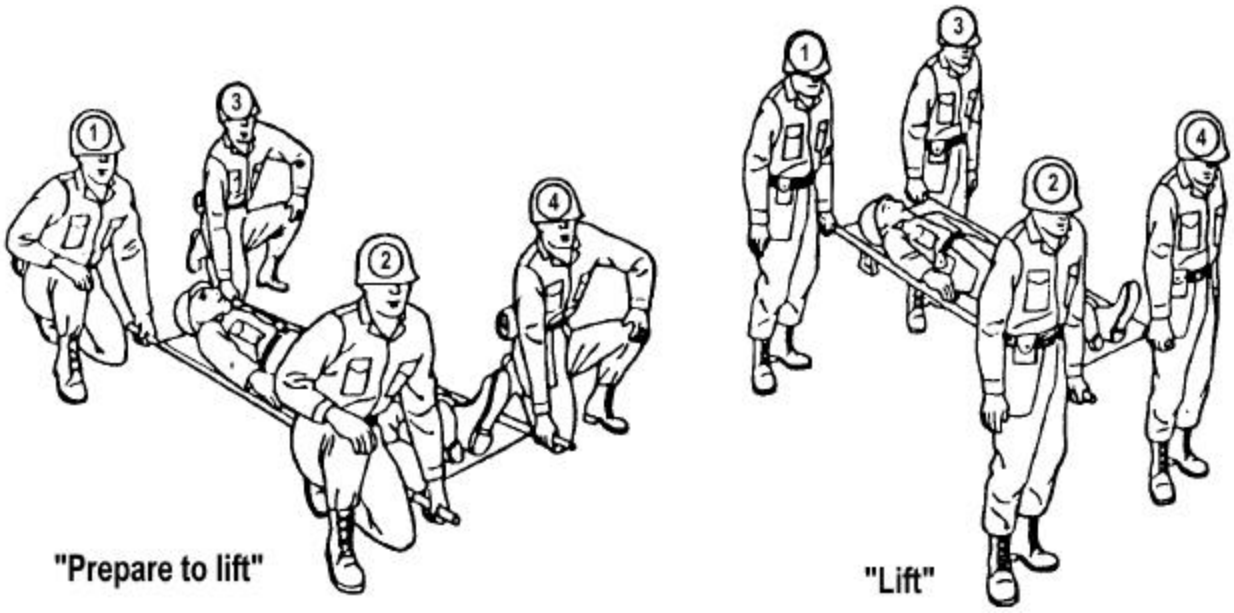

FIGURE 24-1 . FOUR-MAN CARRY

FIGURE 24-2 (A). UPHILL CARRY

FIGURE 24-2 (B). DOWNHILL CARRY

FIGURE 24-3 (A). LITTER POST CARRY

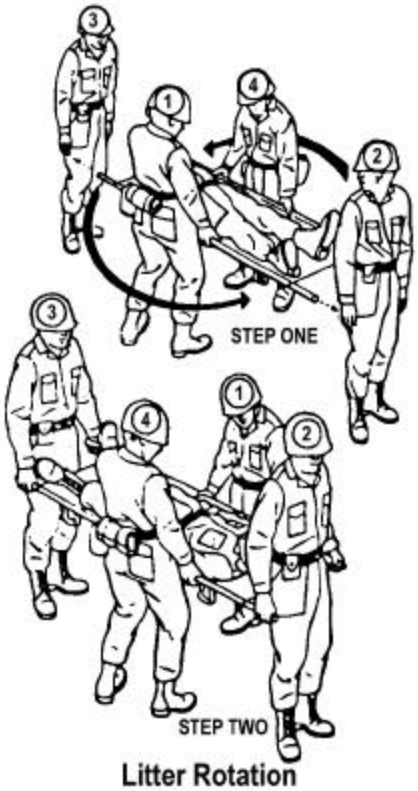

FIGURE 24-3B. LITTER ROTATION

FIGURE 24-4. M1010 AMBULANCE (1-1/4 Ton)

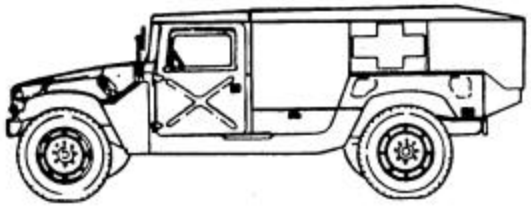

FIGURE 24-5. M996 ARMORED AMBULANCE

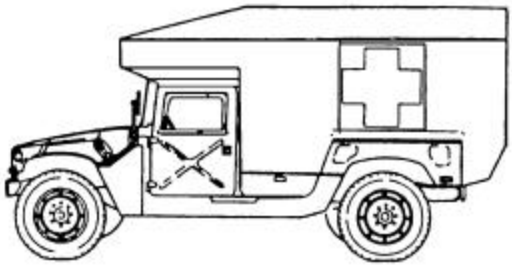

FIGURE 24-6. M997 ARMORED AMBULANCE

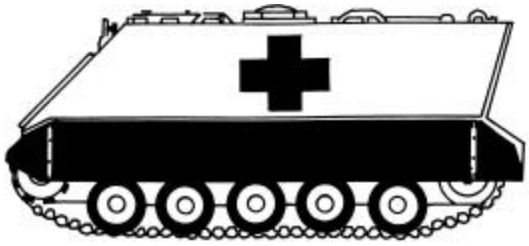

FIGURE 24-7. M113 ARMORED PERSONNEL CARRIER

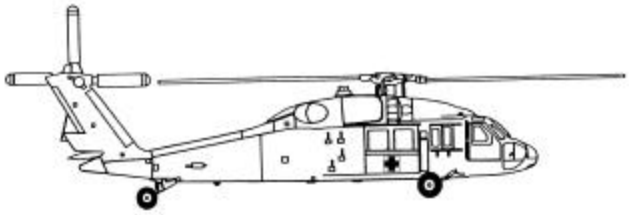

FIGURE 24-8. BLACKHAWK AIR AMBULANCE

FIGURE 24-9. IROQUOIS AIR AMBULANCE

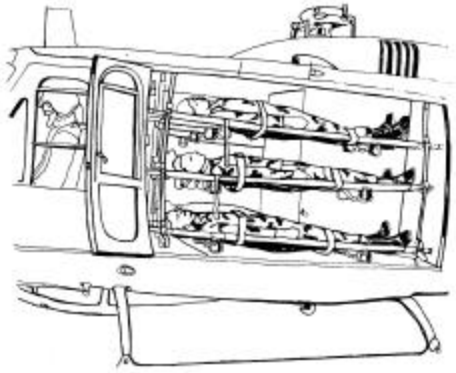

FIGURE 24-10. IROQUOIS AIR AMBULANCE WITH SIX LITTER CASUALTIES

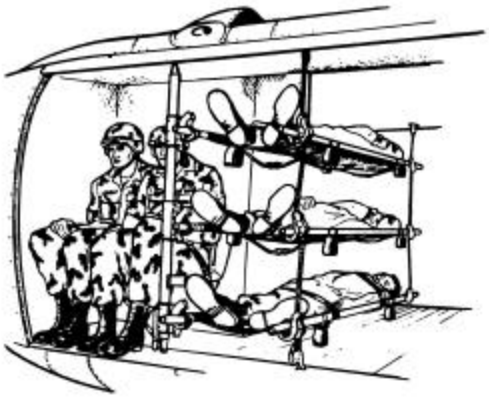

FIGURE 24-11. IROQUOIS AIR AMBULANCE WITH A MIXED LOAD

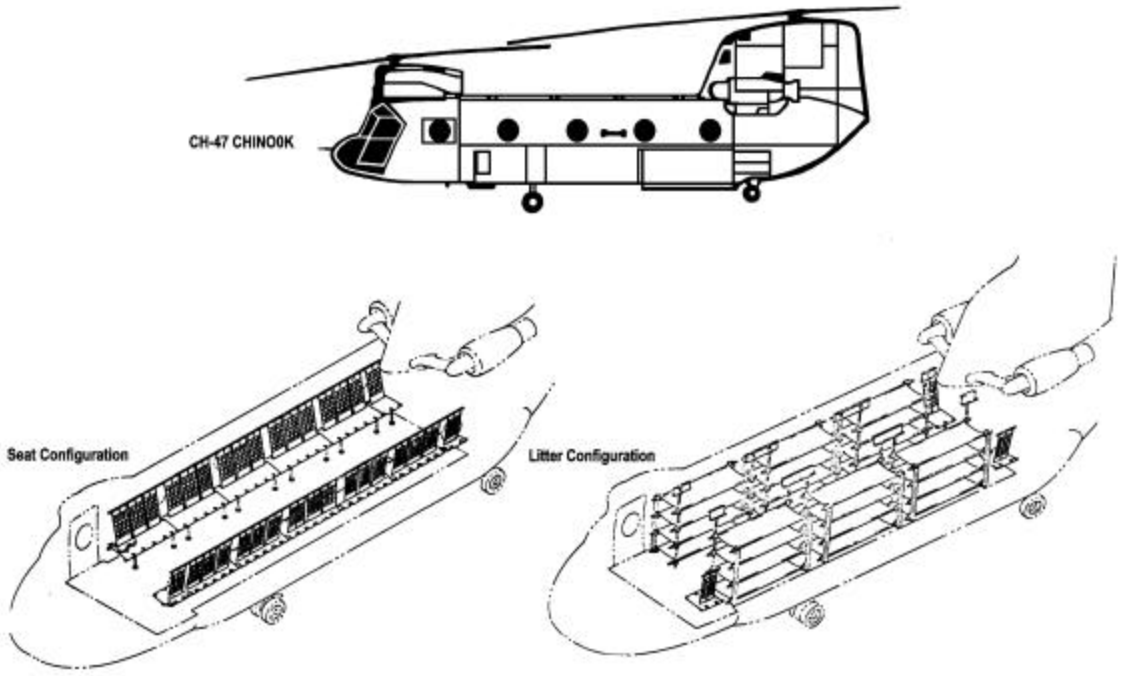

FIGURE 24-12. CHINOOK AIR AMBULANCE WITH LOAD CONFIGURATIONS

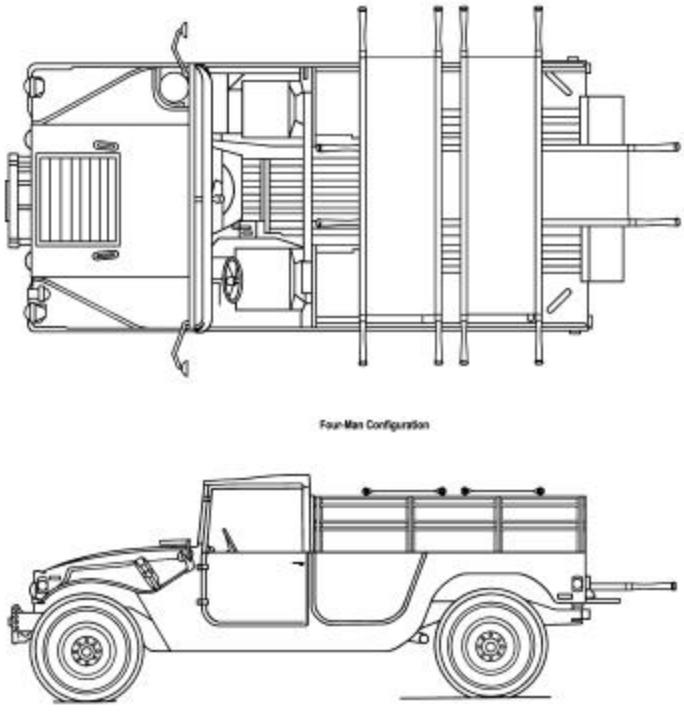

FIGURE 24-13 FIGURE 24-13. TRUCK, CARGO/TROOP CARRIER 1 1/4 TON,4X4, M998 (Four-Man Configuration)

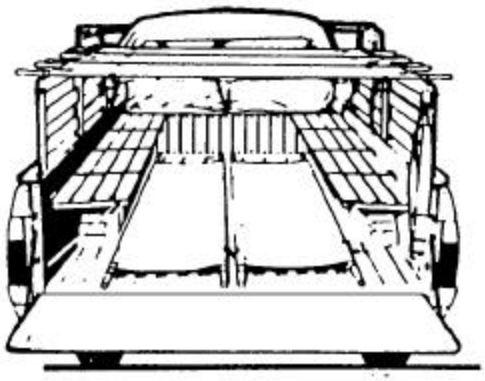

FIGURE 24-14. M880 1 1/4-TON TRUCK (WITH LITTERS)

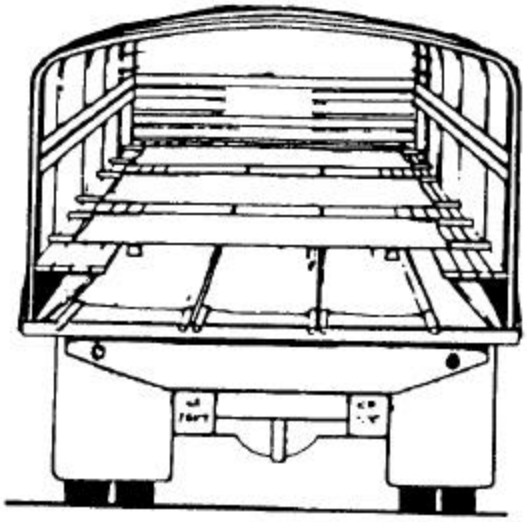

FIGURE 24-15. 2 1/2-TON CARGO TRUCK (WITH LITTERS)

NOTE: The illustration shows only nine litters being transported: three litters on the floor in the front of the truck (hidden in illustration), three on the floor in the rear, and three on the seats. Any vehicle can be used if these are not available.

Return to Table of Contents

COMBAT LIFESAVER COURSE IS0826
Instructor Manual

IS0825, COMBAT LIFESAVER: MEDICAL TASKS

Lesson 25: EVALUATE THE CASUALTY

Equipment and Supplies Needed:

Combat lifesaver aid bag.

Manikin, if used as the simulated casualty.

Overhead projector (if figures from previous lessons are converted to transparencies and shown).

Personnel Needed:

Instructor (PA, 91W 20/30, or other person experienced in evaluating casualties).

Assistant Instructor(s) (91W etc.), as needed.

References:

FM 8-285, Treatment of Chemical Agent Casualties and Conventional Military Chemical Injuries.
FM 21-11, First Aid for Soldier.
STP 8-91-SM, Soldier's Manual: CMF 91 General Medical Tasks.
STP 21-1-SMCT, Soldier's Manual of Common Tasks: Skill Level 1.

25-1. INTRODUCTION

As a combat lifesaver, you will evaluate and treat soldiers as your combat duties permit. This requires you to apply the buddy-aid skills presented in IS0824 and the medical skills presented in IS0825. You must identify what is wrong with the casualty and determine the sequence in which the various treatments will be given. For example, you would restore breathing to a casualty before you would splint his fractured leg. In general, you will restore breathing, then control any major bleeding, then take measures to control shock.

Once life-threatening conditions and/or injuries have been identified and treated, look for other injuries or problems and treat them.

If you have more than one casualty, perform a quick primary survey of each casualty. If you find a life-threatening condition during your primary survey, treat that condition immediately. After you have performed primary surveys on all casualties and have treated all immediate life-threatening conditions, perform a secondary survey on each casualty. Treat the more seriously injured casualty first.

Use common sense when evaluating a casualty. If the environmental conditions favor heat injuries, for example, pay special attention to signs and symptoms of heat injury while also quickly checking for other injuries.

Some evaluations may be performed so fast they may appear to be skipped. If a casualty is yelling in pain, for example, you do not need to perform additional checks to determine if the casualty is conscious and breathing.

OBJECTIVE

TASK

Identify appropriate evaluation and treatment procedures, including sequence, performed on the battlefield.

CONDITIONS

Given multiple-choice examination items pertaining to evaluating and treating a casualty.

STANDARD

Score 70 or more points on the 100-point written examination.

EXPLANATION

NOTE TO INSTRUCTOR: Use an assistant instructor as a simulated casualty to demonstrate the procedures for performing a primary survey and a secondary survey. Explain the steps as you demonstrate. Make sure each student can see the demonstration.

25-2. PERFORM A GENERAL SURVEY OF THE SCENE

Quickly evaluate your immediate surroundings to gather vital information.

Look for obvious, immediate, life-threatening hazards such as flames, the possibility of an immediate explosion, enemy fire, and electrical hazards. If your life and the casualty's life are in danger due to your immediate environment, tactically move the casualty and yourself to safety, thus preventing yourself from being injured.

Note the physical surroundings and the climate. A wall may indicate that the casualty could have fallen. Hot weather may indicate the possibility of heat injury.

Note the type of battle or incident that occurred. This may help you determine the type of injuries you can expect (bullet wounds after a fire fight, shrapnel injuries after a mortar attack, fractured limbs and spinal injuries after an airborne accident, etc.)

Note whether chemical agents may be present.

25-3. PROTECT CASUALTY FROM HAZARDS

If a life-threatening hazard (such as a fire fight) is present, remove the casualty to a place of safety using the cradle drop drag or other appropriate carry (IS0824, Lesson 15).

If the casualty is being burned (flames, chemicals, electrical current, etc.), eliminate the source of the burn (IS0824, Lesson 11). Take care to prevent being injured yourself, especially if separating the casualty from an electrical wire.

If a spinal injury is suspected (IS0824, Lesson 10), take care to prevent additional damage to the spinal column. Immobilize the casualty's neck and back after completing your primary survey.

25-4. PERFORM A PRIMARY SURVEY OF THE CASUALTY

a. Mask and Treat a Chemical Agent Casualty

If you are in a chemical environment protect yourself and then make sure the casualty is properly masked. If signs of severe nerve agent poisoning are present, administer three Mark I kits and one CANA (IS0824, Lesson 14).

If liquid blister agent is in the casualty's eyes, flush his eyes with water even if you are still in a chemical environment (IS0825, Lesson 22).

b. Check the Casualty for Responsiveness

Calmly ask in a loud voice, "Are you okay?" or some similar question that demands a response from the casualty. If he does not respond, gently shake him or tap him on the shoulder and repeat the question.

If the casualty responds, ask the casualty for information ("Where do you hurt?" "Were you hit?" "Were you exposed to chemical agents?" etc.) This information will be useful in your evaluation, but continue to evaluate the casualty in a systematic method since the injury that hurts the most may not be the injury that needs to be treated first.

If the casualty is not responsive, send a soldier for medical help (send soldier to get a combat medic) and continue your evaluation.

c. Check the Casualty's Airway

If the casualty is responsive, evaluate him for airway obstruction (universal choking sign, difficulty in breathing, etc.). If the casualty has poor or no air exchange, apply abdominal anor chst thrusts (IS0824, Lesson 2).

If the casualty is not responsive (unconscious), open his airway using the head-tilt/chin-lift or jaw thrust method (IS0824, Lesson 3).

ASK: If you think the casualty has a fractured neck, which method would you use?

Response: Jaw thrust.

d. Check the Casualty's Breathing

If a responsive casualty is talking or yelling in pain, his breathing is adequate.

If the casualty is not responsive (unconscious), evaluate his breathing by feeling for breath on your face, looking for the rising and falling of his chest, and listening for sounds of breathing.

If the casualty is not breathing or is having difficulty in breathing, open his airway, expel any airway obstruction, and perform mouth-to-mouth resuscitation (IS0824, Lesson 3).

Do not perform mouth-to-mouth or mouth-to-nose resuscitation in a chemical environment.

e. Check the Casualty's Circulation

If the casualty is responsive and breathing adequately, he has a pulse.

If the casualty is unresponsive or not breathing, check his pulse (IS0824, Lesson 3, and IS0825, Lesson 18). If the casualty has no pulse, seek medical help immediately.

If you are qualified to administer cardiopulmonary resuscitation, you can administer CPR and send a soldier to get medical help.

f. Check the Casualty for Bleeding

Look for blood-soaked clothing, spurts of blood, pooling of blood under the body, and other signs of external bleeding.

If a major amputation of a limb is found, apply a tourniquet to the upper arm or thigh and dress the stump (IS0824, Lesson 4).

ASK: If a soldier has had a finger completely cut off, would you apply a tourniquet?

Response: No. Amputation of part of a hand or part of a foot can be controlled by a pressure dressing.

If serious bleeding from a wound of the arm or leg is found, apply a field dressing or improvised dressing and bandage to the wound (IS0824, Lesson 4). Look for both entry and exit wounds. Apply manual pressure and, if the limb is not fractured, elevate the wound.

If serious bleeding from a limb is not controlled by the field dressing, apply a pressure dressing (IS0824, Lesson 4).

If serious bleeding from a limb is not controlled by the pressure dressing, apply a tourniquet (IS0824, Lesson 4).

If an open chest wound is found, seal the wound with the plastic dressing wrapper or other airtight material, tape the sealing material on three sides to form a flutter valve, and apply a field dressing to the wound (IS0824, Lesson 5).

If an open abdominal wound is found, position the casualty in a flexed-knee position, position any protruding organs on the casualty's abdomen, apply a field or improvised dressing over the wound and organs, and secure the dressing (IS0824, Lesson 6).

If an open head wound is found, dress the wound (IS0824, Lesson 7). If the casualty has a severe head injury, immobilize the casualty's head and neck (IS0824, Lesson 10).

If the casualty has more than one severe wound, treat the wound loosing the most blood first.

Do not further expose the wound if you are in a chemical environment.

g. Treat for Chemical Agent Poisoning, If Appropriate

If the casualty is showing signs and symptoms of exposure to chemical agents (IS0825, Lesson 22), the casualty is breathing, and all life-threatening wounds have been treated, administer additional treatment for chemical agent poisoning as needed (IS0825, Lesson 22). (NOTE: The casualty has already been masked and, if severe nerve agent poisoning was present, administered three Mark I antidote kits and one CANA.)

Have the casualty begin self-aid decontamination procedures if he is able (IS0824, Lesson 14). If he cannot, have another soldier decontaminate the casualty. Do not stop your evaluation and treatment to decontaminate the casualty at this time.

If the casualty is suffering from severe nerve agent poisoning and 5 minutes have passed since you administered the last Mark I kit and the CANA, take the casualty's pulse. If the pulse rate is below 90 beats per minute, administer an atropine injector.

If the casualty still twitches, showing signs of seizure, you may administer two more CANA injections at about 5 to 10-minute intervals. Actually, time is less important here than the symptoms. Three CANAs are the limit--normally one from the soldier's mask carrier and two from your combat lifesaver aid bag.

h. Check the Casualty for Shock

Check the casualty for signs and symptoms of shock (clammy and pale skin, severe loss of blood, severe burns, increased breathing rate, mental confusion, etc.).

If hypovolemic shock is present, position the casualty, protect him from the environment, and administer fluids intravenously (IS0824, Lesson 8, and IS0825, Lesson 17).

Position the casualty on his back with the feet elevated slightly above the level of his heart unless his injury requires a different position.

If the casualty has a fractured leg, do not elevate the leg until it has been splinted.

Initiate an I.V. if the casualty has suffered severe blood loss or has second or third degree burns on 20 percent or more of his body.

25-5. PERFORM A SECONDARY SURVEY OF THE CASUALTY

a. Check the Casualty for Fractures

Check legs and arms for protruding bone, abnormal limb position, major wounds, bruises, and painful or tender spots.

If a spinal injury is suspected immobilize the casualty's neck and back (IS0824, Lesson 10).

If a fracture or a massive wound is present, dress open wounds on the limb (including burns) and then immobilize the limb with a padded splint (IS0824, Lesson 9, and IS0825, Lesson 20). Secure the splint above and below the fracture site.

Do not try to straighten (align) the broken bone.

Check the casualty's circulation before and after applying the cravats. Loosen the cravats and reapply, if needed.

Apply a sling and swath to further immobilize a fractured upper arm, forearm, or wrist (IS0824, Lesson 9).

b. Check the Casualty for Burns

Look for reddened, blistered, or charred skin, for burned or singed clothing, and for other evidence of burns. Give special attention to burns about the head and neck for possible inhalation burns. Some burns, such as chemical burns, may not be readily seen unless the casualty's clothing is removed.

Do not further expose wounds if you are in a chemical environment.

If the casualty has a chemical burn, remove as much of the chemical as possible before applying a dressing. (NOTE: Keep white phosphorus burns wet to keep the particles away from oxygen and thus igniting, but do not try to remove the particles.)

Apply a dry dressing to burned areas on the trunk and limbs (IS0824, Lesson 11).

Do not apply a bandage to burns of the face or genitalia.

Remove jewelry from a burned limb.

If an electrical current passed through the casualty, locate and dress both the entry and exit wounds.

If second and third degree burns cover 20 percent or more of the skin surface, initiate an intravenous infusion (IS0825, Lesson 17).

c. Check the Casualty for Closed Head Injury (Concussion)

Look for signs and symptoms of a concussion (IS0824, Lesson 7).

ASK: What are some of the signs and symptoms of a concussion?

Response: Unequal pupils, fluid leaking from the ear or nose, slurred speech, mental confusion, drowsiness, headache, dizziness, loss of memory, loss of consciousness, twitching or convulsions, difficulty in walking (staggering), nausea, and vomiting.

If a closed head injury is suspected, evacuate the casualty to a medical treatment facility.

If the casualty is having convulsions, support his head and neck and maintain an open airway.

If the casualty has a head injury, monitor the casualty's respirations and be prepared to administer mouth-to-mouth resuscitation should it become necessary.

d. Check the Casualty for Environmental Injuries

If the casualty has been working in a hot environment, check for signs and symptoms of heat stroke, heat exhaustion, and heat cramps (IS0824, Lesson 12).

If the casualty has heat stroke, expose the skin, pour or spray water on him, fan him, and evacuate him as quickly as possible. Continue cooling efforts, such as pouring water over the casualty and fanning him, during evacuation. Have him drink cool water if he can tolerate the water without vomiting.

If the casualty is suffering from heat cramps or heat exhaustion, move him to a shaded place and cool him off. Have the casualty drink at least one quart of cool water.

All casualties with heat exhaustion or heat stroke should get an intravenous infusion (IS0825, Lesson 17). Also, try to get the casualty to drink water.

If the casualty has been exposed to cold or freezing weather, check for signs and symptoms of general hypothermia, frostbite, immersion syndrome, and chilblain (IS0824, Lesson 13).

If general hypothermia is present, move the casualty to a protected location and use a heat source (such as another soldier's body) to rewarm the casualty. Evacuate the casualty as soon as practical.

If deep frostbite is found, move the casualty to a warm place, thaw the area, and evacuate the casualty as soon as practical.

Do not thaw frozen feet if the casualty will be required to walk or if the feet will refreeze before reaching the medical treatment facility.

If superficial frostbite or chilblain is found, rewarm and protect the affected area.

If immersion syndrome is found, dry and rewarm the affected area.

Check the casualty for visual problems resulting from lasers weapons or snow blindness (IS0824, Lesson 11, and IS0824, Lesson 13).

Protect the casualty from additional injury. Cover the eyes with a dark cloth if the casualty is in pain or if vision loss is severe.

Evacuate the casualty if practical.

e. Check the Casualty for Other Wounds/Fractures

Look for minor wounds and fractures. Dress and bandage the wounds as time permits. Splint fractured fingers using the same basic splinting procedures given in IS0824, Lesson 9.

f. Check the Casualty for Combat Stress Reaction

If the casualty appears to be injured but you cannot find any physical injury, look for signs and symptoms of combat stress reaction (IS0825, Lesson 23). If combat stress reaction is suspected, take appropriate measures.

25-6. MONITOR THE CASUALTY

Monitor the casualty for life-threatening conditions throughout the evaluation process. For example, a casualty who is breathing when you begin your evaluation may suddenly stop breathing. Anytime a life-threatening condition is detected, stop your evaluation and treat the life-threatening condition.

Some conditions may require time to properly evaluate. If you apply a field dressing to a bleeding wound on the casualty's leg, for example, continue to monitor the injury in case additional measures (pressure dressing or tourniquet) are needed to control bleeding. You can proceed with your evaluation and treatment of the casualty while continuing to monitor the wound for bleeding.

If you have administered nerve agent antidote to a severe nerve agent casualty, continue to check the casualty. A casualty who has received sufficient atropine should have a decrease in the amount of secretions and be breathing more easily. If the casualty is still experiencing a large amount of secretion or difficulty breathing administer more atropine (IS0825, Lesson 22). Remember, for control of seizures give another CANA up to the limit of three.

If the casualty has not been treated for shock, take measures to prevent shock. The measures to control shock given in Lesson 8 of IS0824 (loosen clothing, position the casualty, and protect the casualty from the cold) are also used to prevent shock from occurring.

Monitor a heat cramp or heat exhaustion casualty to ensure he continues to drink water without vomiting and his condition does not become more serious. Be prepared to administer mouth-to-mouth resuscitation, increase cooling efforts, initiate an I.V., and evacuate the casualty if his condition worsens.

Be ready to open his airway and administer mouth-to-mouth resuscitation should the need arise. If medical personnel arrive, report your findings.

Insert an oropharyngeal airway to keep an unconscious casualty's airway open if the airway is needed and is the proper size (IS0825, Lesson 21).

Continue to perform any needed procedures, such as keeping white phosphorus burns wet.

If you are treating more than one casualty, continue to monitor the other casualties for life-threatening conditions while administering treatment to a casualty.

Whenever possible, have the casualty evaluated by a combat medic or other medical personnel.

Continue to monitor the casualty until you return the casualty to duty, until a medical person (usually a combat medic or member of a medical evacuation team) takes over, or until you must resume your combat duties.

If the casualty requires evacuation, transport him using the best means available (IS0825, Lesson 25, and IS0824, Lessons 15).

If you are the leader of a litter team evacuating the casualty, continue to monitor the casualty during the evacuation. Stop and render the appropriate aid if a life-threatening condition arises.

If a medic is not available and a soldier has a minor headache, cold, or hay fever, administer acetaminophen or pseudoephedrine hydrochloride tablets as needed if no contraindications are present (IS0825, Lesson 24).

25-7. ASSIST THE MEDIC

If the medic requests assistance and your combat duties allow, assist the combat medic in providing care to casualties and evacuating casualties. The medic will provide instructions as needed.

Ask for question or comments.

Return to Table of Contents

COMBAT LIFESAVER RECERTIFICATION PERFORMANCE EXAMINATIONS
Units may reproduce the exam

(Part 1 of 4 Parts)

INSTRUCTIONS FOR ADMINISTERING PERFORMANCE EXAMINATION

INITIATE AN INTRAVENOUS INFUSION

This test is based on Lesson 17, Initiate an Intravenous Infusion for Hypovolemic Shock, of Interschool Subcourse 0825, Combat Lifesaver Course: Medical Tasks.

All evaluators must be proficient in administering intravenous infusions and must be able to handle an emergency should one arise.

INSTRUCTIONS TO THE EVALUATOR:

Determine the number of I.V. testing stations to be set up. This will depend upon the number of qualified evaluators, the number of combat lifesavers to be tested and available facilities.

Set out the needed supplies (see Equipment and Supplies Required on following page) at each station. (Two I.V. bags, two I.V. sets, and two catheter/needle units should be set out so the combat lifesaver can discard supplies accidentally contaminated.)

Divide the combat lifesavers into pairs and assign them to stations. Assign one member of each pair to be the "casualty" and the other to be the "combat lifesaver." After the "combat lifesaver" has completed his performance test, have the combat lifesavers switch roles and replace used supplies. (Note to Evaluator: An assistant or other person can also serve as the casualty.)

The evaluator can ask a question in order to clarify what a combat lifesaver did, such as checking for leaks or for drips in the drip chamber. If an evaluator sees a dangerous situation, such as the needle being inserted improperly, he can stop the procedure, tell the combat lifesaver why he was stopped, and give him a NO-GO for that attempt.

A combat lifesaver who fails the performance test can be retested. He should be told why he failed and what he should have done. The instructor may have a different person serve as the casualty (another combat lifesaver, an assistant, or the evaluator himself) during the retest.

After completing the task, have the combat lifesaver remove the catheter and apply an adhesive dressing or other dressing to the puncture site. This is not part of the examination. Assist the combat lifesaver as needed.

EQUIPMENT AND SUPPLIES REQUIRED:

Timepiece with a second hand (for evaluator).

I.V. fluids (Sodium Chloride Inj NSN 6505013723425)--2 bags.

Intravenous injection sets (preferably NSN 6515014721863)--2 sets.

Catheter and needle unit, intravenous 18 gauge (NSN6515013156227).-- 2 units

Constricting band/tube drain 1x18", (NSN 6515011885316)

Cleansing Pads (preferably povidone-iodine impregnated cotton pad, (NSN 6510010100307).

Scissors (preferably 7 1/4 inch bandage scissors, NSN 6515009357138).

Adhesive tape (preferably 1 inch width surgical camouflaged, NSN 6510005260162).

Adhesive bandages (To be used when the I.V. neddle is removed.(preferably NSN 6510009137909).

Pad Isopropyl Alcohol (NSN 6510007863736)

Gloves to put on before administering an I.V. to a live subject (preferably NSN 6515002267692).

Gauze pads (if desired).

(I.V. stand or other device for hanging I.V. bag, if desired.)

PREPARE THE COMBAT LIFESAVER:

Have the "combat lifesaver" put on his gloves. Have the "casualty" expose his arm and lie down. When the combat lifesaver and the casualty are ready, read the "Situation" to the "combat lifesaver."

Situation:

TELL THE COMBAT LIFESAVER: "You have evaluated the casualty and determined that an intravenous infusion needs to be initiated. In order to pass this test, you must initiate an I.V. while maintaining sterility. You will insert the catheter and needle into the casualty's vein on his arm and perform all of the I.V. procedures except one. You will simulate infusing the I.V. solution into the casualty's vein instead of actually opening the clamp on the I.V. tubing. This will keep the I.V. solution from actually being introduced into the vein. When you come to the point where the catheter is inserted and the clamp would normally be opened, tell me what you would do if the situation were a real emergency. You may tell me what you are doing if you think it is not obvious, but do not waste time. Remember that the constricting band should not stay on for more than 2 minutes. I may ask you questions during the procedure. Answer the questions quickly and continue initiating the I.V. You have your supplies. If you have put on your gloves, you are ready to start. Ready? Begin."

PERFORMANCE CHECKLIST

INITIATE AN INTRAVENOUS INFUSION

Student: _____

Evaluator: _____

	GO	NOGO
Puts on gloves (should be performed before starting).	____	____
Removes protective covering from I.V. bag and identifies any leaks, passed expiration date, or unclear solution.	____	____
Checks IV set and catheter/needle unit and identifies any tears, cracks, watermarks, or damage.	____	____
Discards any bag, set, or catheter/needle unit that is not sterile.	____	____
Moves clamp on tubing away from the drip chamber and tightens the clamp.	____	____
Removes protective covering from outlet port, removes spike protective cap on infusion set and inserts spike into I.V. outlet port with a twisting motion without contaminating spike or port tip.	____	____
Holds (hangs) bag up and squeezes drip chamber until it is half-filled with solution.	____	____
Holds end of I.V. set tubing above bottom of bag.	____	____
Releases or loosens clamp on tubing and loosens protective cap over the adapter.	____	____
Gradually lowers tubing until solution reaches adapter (air expelled from tubing).	____	____
Reclamps tubing and retightens cap on adapter.	____	____
Looks and feels for vein.	____	____
Selects appropriate vein for infusion (not over a joint; free of scars, moles, and hair; etc.).	____	____
Applies constricting band above infusion site.	____	____
Instructs casualty to clench and relax fist, then to leave fist clenched.	____	____
Cleanses the selected infusion site with a povidone-iodine impregnated cotton pad and wipes site once from proximal to distal with an isopropyl alcohol pad..	____	____

INITIATE AN INTRAVENOUS INFUSION: Performance Checklist

	GO	NO GO
Removes protective cap from catheter/needle unit without touching the needle or catheter.	____	____
Pulls skin taut over injection site.	____	____
Positions needle with bevel up slightly to side of the selected vein at an angle (20^{o} to 30^{o}).	____	____
Inserts bevel of needle into skin, lowers angle, and inserts into vein.	____	____
Checks flash chamber for blood.		
If no blood in chamber, withdraws catheter/needle slightly and inserts the needle into the vein.	(____	____)
Threads catheter (up to hub) into the vein.	____	____
Removes flash chamber with needle without pulling catheter out of vein.	____	____
Asks casualty to unclench fist and releases constricting band.	____	____
Constructing band has not been in place for more than 2 minutes (approximately).	____	____
Removes adapter cap and connects adapter and catheter hub.	____	____
SIMULATES opening clamp and checking flow of solution in drip chamber.	____	____
Secures hub and adapter with strips of tape.	____	____
Loops tubing on extremity and secures tubing with tape.	____	____
Checks for infiltration (asks casualty about pain; looks for swelling, redness, and leaking around site; feels for coolness, or some other method of checking for infiltration).	____	____
Question: What should you do if the infusion site is red, swollen, and cool to the touch?		
Answer: Discontinue the I.V. and attempt to initiate another I.V. (above failed site or on another extremity) using a new needle/catheter unit.	____	____
[Exact response may differ. Instructor may ask questions if the combat lifesaver's response is not complete.]		

OVERALL EVALUATION GO NO GO
[Any no-go gives an overall evaluation of no-go.]

Evaluator's Signature _____

Date _____

Return to Table of Contents

COMBAT LIFESAVER RECERTIFICATION PERFORMANCE EXAMINATIONS

(Part 2 of 4 Parts)

INSTRUCTIONS FOR ADMINISTERING PERFORMANCE EXAMINATION

MEASURE AND MONITOR A CASUALTY'S PULSE

This test is based on Lesson 18, Measure and Monitor a Casualty's Pulse, of Interschool Subcourse 0825, Combat Lifesaver Course: Medical Tasks.

INSTRUCTIONS TO THE EVALUATOR:

Determine the number of testing stations to be set up. This will depend upon the number of evaluators, the number of combat lifesavers to be tested and available facilities.

Set out the timepieces and writing materials (see Equipment and Supplies Required below) at each station. Combat lifesavers and instructors can furnish their own timepieces if desired.

Divide the combat lifesavers into pairs and assign them to stations. Assign one member of each pair to be the "casualty" and the other to be the "combat lifesaver."

The evaluator should take the casualty's radial pulse while the "combat lifesaver" is taking the casualty's carotid pulse so pulse rates can be compared.

After the "combat lifesaver" has completed his performance test, have the combat lifesavers switch roles.

A combat lifesaver who fails the performance test can be retested. He should be told why he failed and what he should have done. The instructor may have a different person to serve as the casualty for the retest if desired, including an assistant or the evaluator himself.

EQUIPMENT AND SUPPLIES REQUIRED:

Watch or clock with second hand (both combat lifesaver and evaluator must have their own timepieces or the timepiece must be easily seen by both).

Paper and pencil (for combat lifesaver to write his results).

PREPARE THE COMBAT LIFESAVER:

Have the "casualty" expose his neck and his wrist, then lie down.

When both are ready, read the "Situation" to the "combat lifesaver."

Situation:

TELL THE COMBAT LIFESAVER: "You are going to take a casualty's pulse to determine his heart rate. Take the casualty's pulse using the carotid artery. Use your watch or the

timepiece provided. When you have finished, write down the casualty's pulse rate and give the paper to me. Ready? Begin."

PERFORMANCE CHECKLIST

MEASURE AND MONITOR A CASUALTY'S PULSE

Student: _____

Evaluator: _____

	GO	NO GO
Locates carotid pulse site in the groove along the casualty's neck.	_____	_____
Counts casualty's pulse rate for one full minute.	_____	_____
Pulse rate obtained by student does not differ from evaluator's results by more than 4 beats per minute.	_____	_____

Student's results _____

Evaluator's results _____

[NOTE TO EVALUATOR: Combat lifesavers do not round pulse rate off to an even rate. Both odd and even pulse rates are acceptable.]

OVERALL EVALUATION [Any no-go gives an overall evaluation of no-go.]	GO	NO GO

Evaluator's Signature _____

Date _____

Return to Table of Contents

COMBAT LIFESAVER RECERTIFICATION PERFORMANCE EXAMINATIONS

(Part 3 of 4 Parts)

INSTRUCTIONS FOR ADMINISTERING PERFORMANCE EXAMINATION

RESTORE BREATHING TO A CASUALTY

This test is based on Lesson 2, Perform First Aid to Clear an Object stuck in the Throat of a Conscious Casualty, and Lesson 3, Perform Mouth-to-Mouth Resuscitation, of Interschool Subcourse 0824, Combat Lifesaver Course: Buddy-Aid Tasks.

INSTRUCTIONS TO THE EVALUATOR:

Determine the number of testing stations to be set up. This will depend upon the number of evaluators, the number of manikins (if used), the number of students to be tested, and available facilities.

Set out a manikin (if used) at each station.

Use an assistant instructor as the simulated casualty for performing the abdominal thrusts on a conscious casualty. Once the casualty "becomes unconscious," use a manikin to be the casualty if an acceptable manikin is available. Clean the manikin's mouth and nose areas with bleach before each use.

Have the assistant acting as the casualty give the universal distress signal for choking at your signal.

A combat lifesaver who fails the performance test can be retested. He should be told why he failed and what he should have done.

EQUIPMENT AND SUPPLIES REQUIRED:

Manikin suitable for administering modified abdominal thrusts, finger sweeps, and mouth-to-mouth resuscitation.

Bleach and cloth to clean manikin.

PREPARE THE COMBAT LIFESAVER:

Read the situation to the combat lifesaver.

<u>Situation</u>

TELL THE COMBAT LIFESAVER: "In order to pass this test, you must perform the techniques for clearing an airway obstruction using abdominal thrusts and restoring breathing using mouth-to-mouth resuscitation. I will provide additional instructions and ask questions as the evaluation proceeds. Do not use full force when administering the thrusts to a live person. Begin when the casualty gives the universal distress signal for choking. Assume that the casualty shows signs of complete airway blockage."

IF A MANIKIN IS NOT USED, tell the student "Simulate the finger sweep and modified abdominal thrusts."

"Ready?" Give signal to assistant for choking signal.

PERFORMANCE CHECKLIST

RESTORE BREATHING TO A CASUALTY

Student: _____

Evaluator: _____

	GO	NO GO
Responds to universal distress signal for choking.	____	____
Stands behind casualty.	____	____
Inserts arms under casualty's arms and around casualty's waist.	____	____
Places fist on midline slightly above navel and covers fist with other hand.	____	____
Presses fists into abdomen with a quick inward, upward motion [full force not applied], then relaxes the hold.	____	____
Administers thrusts at a rate of one thrust every 4 or 5 seconds.	____	____
TELL THE COMBAT LIFESAVER: "Stop administering thrusts. The casualty has lost consciousness and you have lowered the casualty to the floor. Use the manikin to continue your efforts to restore breathing."		
Opens the casualty's mouth and performs a finger sweep (grasps tongue and lower jaw between thumb and index finger, lifts jaw open, inserts index finger of other hand along the inside of cheek to base of tongue, and uses a hooking motion to remove any visible obstruction).	____	____
TELL THE COMBAT LIFESAVER: "No obstruction was felt or removed. Continue rescue efforts."		
Opens the airway by placing one hand on the casualty's forehead and tilting the head back while placing the fingertips of other hand under the tip of casualty's chin and lifts jaw forward.	____	____
Pinches nostrils closed, seals mouth over casualty's mouth, and delivers two full breaths.	____	____
Releases casualty's nostrils and breaks seal over mouth.	____	____
TELL THE COMBAT LIFESAVER: "The casualty's airway is still blocked. Attempt to clear his airway by administering modified abdominal thrusts and additional finger sweeps."		
Kneels astride the casualty's thighs.	____	____

RESTORE BREATHING TO A CASUALTY: Performance Checklist

	GO	NO GO
Places heel of one hand on the midline just above casualty's navel and places other hand on top of first.	____	____
Delivers forward, upward thrust; then relaxes.	____	____
NOTE TO EVALUATOR: Allow student to perform three to five thrusts, then give additional instructions.		
TELL THE COMBAT LIFESAVER: "The blockage is dislodged. Perform another finger sweep to remove the obstruction."		
Performs finger sweep using the procedures given above.	____	____
TELL THE COMBAT LIFESAVER: "The obstruction has been removed but the casualty is not breathing on his own. Check to see if the airway is open."		
Administers two full breaths.	____	____
TELL THE COMBAT LIFESAVER: "The casualty's airway is now open, but the casualty is still not breathing."		
Checks carotid pulse with fingertips (not thumb) along groove next to larynx.	____	____
TELL THE COMBAT LIFESAVER: "The casualty still has a pulse. Proceed." Ventilates the casualty at the rate of one cycle (deep breath, seal nose and mouth, blow, break seal) every 5 seconds (approximately).	____	____
NOTE TO EVALUATOR: Allow student to perform at least three ventilations.		
ASK THE COMBAT LIFESAVER: "How often would you check casualty's pulse?"		
Answer. Every minute. Every 12 breaths. (Either response or a similar response acceptable.)	____	____

OVERALL EVALUATION (A no-go on any step gives an overall evaluation of no-go.)	GO ____	NO GO ____

Evaluator's signature _____

Date: _____

Return to Table of Contents

COMBAT LIFESAVER RECERTIFICATION PERFORMANCE EXAMINATIONS

(Part 4 of 4 Parts)

INSTRUCTIONS FOR ADMINISTERING PERFORMANCE EXAMINATION

STOP BLEEDING FROM A CASUALTY'S LIMB

This test is based on Lesson 4,Perform First Aid for Bleeding of an Extremity, of Interschool Subcourse 0824, Combat Lifesaver Course: Buddy-Aid Tasks.

INSTRUCTIONS TO THE EVALUATOR:

Determine the number of testing stations to be set up. This will depend upon the number of evaluators, the number of manikins (if used), the number of students to be tested, and available facilities.

Use an assistant instructor or a manikin as the simulated casualty.

Set out the needed supplies (see Equipment and Supplies Required) at each station.

Position the simulated casualty on his/its back with the leg exposed. Make a mark on the casualty's leg about half way between the knee and the ankle to indicate the location of the wound.

A combat lifesaver who fails the performance test can be retested. He should be told why he failed and what he should have done.

EQUIPMENT AND SUPPLIES REQUIRED:

Manikin, if used.

Field dressing.

Materials for pressure dressing wad, pressure dressing bandage, tourniquet band, and securing materials (4 muslin bandages, for example).

Rigid object (stick) for tourniquet.

Padding for tourniquet (pants leg can be used).

Pack, log, or other object to elevate leg.

PREPARE THE COMBAT LIFESAVER:

Read the situation to the combat lifesaver.

Situation

TELL THE COMBAT LIFESAVER: "In order to pass this test, you must control the bleeding of this simulated casualty using a field dressing, manual pressure, elevation, pressure dressing, and tourniquet. The wound is represented by this mark (show mark). These are your materials (indicate materials). Assume you have already exposed the wound and determined that the casualty has blood circulation below the wound. The

casualty has no broken bones. I will provide additional information on the casualty's condition and ask questions as the evaluation proceeds. Begin by applying the field dressing. Start."

PERFORMANCE CHECKLIST

STOP BLEEDING FROM A CASUALTY'S LIMB

Student: _____

Evaluator: _____

	GO	NO GO
Removes the field dressing from plastic and paper wrappers without contaminating the white side of the dressing.	____	____
Grasps tails of the field dressing with both hands, holds the dressing directly over the wound with white side down, pulls the dressing open, and places the dressing pad on the wound.	____	____
Holds (or has casualty hold) the dressing in place and wraps the tails around the injured limb, covering the exposed edges of the dressing.	____	____
Ties the tails into a nonslip knot over outer edge of the dressing (not over the wound).	____	____
Checks the casualty's circulation below the wound.	____	____
(Loosens and reties tails if there is no circulation below the wound.)	(____	____)
Applies direct manual pressure over the dressing (or has casualty apply pressure if able).	____	____
Elevates the wound.	____	____
TELL THE COMBAT LIFESAVER: "The casualty is still bleeding heavily from the wound. Proceed to apply a pressure dressing"		
Places wad of folded material on top of the field dressing directly over the wound.	____	____
Wraps a strip of cloth (cravat) tightly around the wad and limb.	____	____
Secures wad by tying tails in a nonslip knot directly over the wound.	____	____
Checks circulation below the injury.	____	____
(Loosens and reties tails if there is no circulation below the wound.)	(____	____)
TELL THE COMBAT LIFESAVER: "The casualty is still bleeding heavily from the wound and the pressure dressing cannot control the bleeding."		
Makes a band (cravat) at least 2 inches wide.	____	____
Wraps the tourniquet band above the knee.	____	____

STOP BLEEDING FROM A CASUALTY'S LIMB Performance Checklist

	GO	NO GO
Has padding (trouser leg, other material, etc.) between the tourniquet band and the skin.	____	____
Ties a half-knot, places the rigid object on top of the half-knot, and ties a full knot over the rigid object.	____	____
Twists rigid object to tighten the tourniquet band. [Simulate if a person is the casualty.]	____	____
TELL THE COMBAT LIFESAVER: "Assume the tourniquet is tight enough to stop the arterial bleeding below the band. Proceed to secure the rigid object."		
Secures rigid object using the tails of the tourniquet band or a strip of cloth (cravat) wrapped around the limb.	____	____
Rigid object is secured (tourniquet does not untwist).	____	____
ASK THE COMBAT LIFESAVER: "What can you do to indicate to medical personnel that a tourniquet has been applied to the casualty?"		
Answer: Write a "T" and the time of application on his forehead.	____	____
[NOTE TO EVALUATOR: A response of writing a "T" without mentioning time of application is acceptable, but remind the student about writing the time of application.]		
OVERALL EVALUATION (A no-go on any step gives an overall evaluation of no-go.)	GO ____	NO GO ____

Evaluator's signature _____

Date: _____

Return to Table of Contents